

**FINDING OF NO SIGNIFICANT IMPACT  
FOR  
DRAINAGE IMPROVEMENTS ON WOOD STREET, OLIVE BRANCH, AND  
JACKSON AND PRINCE STREETS  
CITY OF TEXARKANA, ARKANSAS  
FEMA-1266-DR-AR**

**BACKGROUND**

The City of Texarkana has applied to the Federal Emergency Management Agency (FEMA) for assistance with a drainage improvements project. FEMA is proposing to provide assistance for this project through the Hazard Mitigation Grant Program (HMGP) under Presidential Disaster Declaration FEMA-1266-DR-AR.

In accordance with 44 Code of Federal Regulations (CFR) for FEMA, Subpart B – Agency Implementing Procedures, Part 10.9, an Environmental Assessment (EA) was prepared pursuant to Section 102 of the National Environmental Policy Act (NEPA) of 1969, as implemented by the regulations promulgated by the President’s Council on Environmental Quality (40 CFR Parts 1500-1508). The purpose of the EA was to analyze the potential environmental impacts of the proposed drainage improvements project, and to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI). In the EA process, FEMA considered two alternatives: (1) No Action Alternative and (2) 100-Year Storm Design (Proposed Action). Several alternatives were considered but then dismissed due to technical reasons. Under Alternative 2, the City of Texarkana would design and construct the Wood Street, Olive Branch, and Jackson and Prince Street projects to contain stormwater discharges from a 100-year storm event. At Wood Street the City would upgrade the existing storm sewer system along a portion of Wood Street and Broad Street and construct 4 new channel segments to connect the storm sewer system to an existing outfall. At Olive Branch the City would install a double 7-foot by 3-foot reinforced box culvert for approximately 100 linear feet. In addition, the City would widen and shape the existing channel upstream and downstream of the improved culvert for approximately 1,600 linear feet. At Jackson and Prince Streets, the City would install double 6-foot by 4-foot concrete box culverts. In addition, the City would widen and shape the existing channel from Division Street to east of Prince Street (approximately 1,300 linear feet). The improvements would reduce the risk of localized flooding for an estimated 31 homes and 3 businesses.

In response to the high risk to human health and safety associated with the occurrence of flooding that threatens the three project areas, Alternative 2, the Proposed Action, has been selected based on the needs of the City of Texarkana.

**FINDINGS**

Based upon the conditions and information contained in the EA for the drainage improvements project (August 2004) and in accordance with FEMA’s regulations in 44 CFR Part 10 (Environmental Considerations) and Executive Orders 11988 (Floodplain Management), 11990 (Protection of Wetlands), and 12898 (Environmental Justice), FEMA has made the following determinations:

The proposed project, as described in the EA, will not result in any significant adverse impacts to existing land use, water resources (surface water, groundwater, wetlands, waters of the United States, and floodplains), air quality, noise, biological resources (vegetation, fish and wildlife, state-and federally listed threatened or endangered species and critical habitats), safety issues, hazardous materials and waste, and cultural resources, or result in disproportionately high or

adverse effects on minority or low-income populations. The Proposed Action is also in compliance with all relevant federal, state, and local laws.

### CONDITIONS

The following conditions and all other conditions identified in the EA must be met as part of this project. Failure to comply with these conditions may jeopardize federal funds:

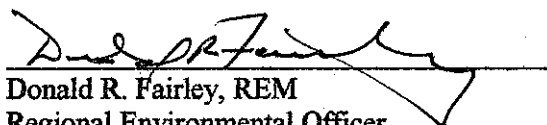
1. If project activities include the stockpiling of soil or fill on-site, the Applicant shall cover these soils to help prevent fugitive dust and increased soil erosion into stormwater pathways.
2. The Applicant will employ soil erosion mitigation measures including the use of temporary installation silt fences and/or hay bales, and the staging of construction equipment in existing developed areas, such as paved parking lots, to reduce runoff and soil erosion from the project area.
3. Following construction activities, exposed, compacted soils will be aerated and revegetated with native grasses as appropriate to prevent future soil erosion.
4. The Applicant will obtain a stormwater permit from ADEQ.
5. The Applicant will coordinate with the local floodplain administrator for possible local permits or approvals prior to construction.
6. To reduce temporary impacts to air quality, the Applicant will be required to water down construction areas when necessary. To reduce emissions of criteria pollutants, fuel-burning equipment running times shall be kept to a minimum and engines would be properly maintained.
7. Trees shall be fenced around the dripline to minimize encroachment by project personnel and equipment.
8. The applicant will comply with the USACE Nationwide Permit General Conditions and Regional Conditions for the Olive Branch project. The applicant will submit final engineering project designs to USACE for permit requirements.
9. Any hazardous materials discovered, generated, or used during implementation of the proposed project will be disposed of and handled by the Applicant in accordance with applicable local, state, and federal regulations.
10. Construction will take place during normal business hours. Construction/hauling will be limited to daylight hours.
11. The Applicant will coordinate with utility companies and the Texarkana Department of Public Works for potential presence of buried pipelines or cables in or near the project sites.
12. Appropriate signage and barriers shall be in place prior to construction activities to alert pedestrians and motorists of the activity, and to alert motorists of any new traffic patterns, detours, or delays.
13. To minimize risks to safety and human health, all drainage improvement activities will be performed using qualified personnel trained in the proper use of the appropriate equipment including all appropriate safety precautions. Additionally, all activities will be conducted in a safe manner by trained personnel, in accordance with the standards specified in OSHA regulations.

14. To mitigate for any potential safety risks, temporary fencing will be employed around the project site and equipment would be properly stored to prevent unauthorized access and discourage tampering.
15. Should any historic or archaeological materials of potential significance be discovered during project construction or staging of equipment, all activities on the site will be halted immediately and the Applicant will consult with FEMA, the Arkansas Department of Emergency Management, and the SHPO.

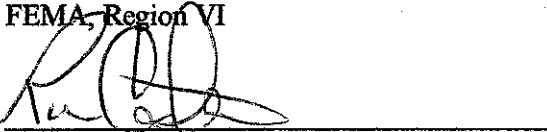
### CONCLUSIONS

Based on the findings of the attached EA, coordination with the appropriate agencies, and adherence to the project conditions set forth in the EA and this FONSI, FEMA has determined that the proposed project qualifies as a major federal action that will not significantly affect the quality of the natural and human environment. As a result of this FONSI, an EIS will not be prepared (44 CFR Part 10.8) and the proposed project as described in the attached EA may proceed.

### APPROVAL

  
Donald R. Fairley, REM  
Regional Environmental Officer  
FEMA, Region VI

Date: 16 August 2004

  
Ron Castleman  
Regional Director  
FEMA, Region VI

Date: 8/17/04

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ADEM	Arkansas Department of Emergency Management
ADEQ	Arkansas Department of Environmental Quality
AHTD	Arkansas Highway and Transportation Department
ANHC	Arkansas Natural Heritage Commission
APE	Area of Potential Effect
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
dB	decibel
DNL	Day-Night Average Sound Level
EA	Environmental Assessment
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHBM	Flood Hazard Boundary Map
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FPPA	Farmland Protection Policy Act
H&H	Hydrologic and Hydraulic
HMGP	Hazard Mitigation Grant Program
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
NCA	Noise Control Act
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NGVD	National Geodetic Vertical Datum
NHPA	National Historic Preservation Act
NO <sub>2</sub>	nitrogen dioxide
NPS	National Park Service
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRS	NRS Consulting Engineers
NWI	National Wetland Inventory
O <sub>3</sub>	ozone
OSHA	Occupational Safety and Health Administration

Pb	lead
PL	Public Law
PM <sub>10</sub>	particulate matter less than or equal to 10 microns
RCP	reinforced concrete pipe
SCS	Soil Conservation Service
SHPO	State Historic Preservation Officer
SO <sub>2</sub>	sulfur dioxide
TUTD	Texarkana Urban Transit District
URS	URS Group, Inc.
USACE	U.S. Army Corps of Engineers
U.S.C.	U. S. Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound

## **1.1 PROJECT AUTHORITY**

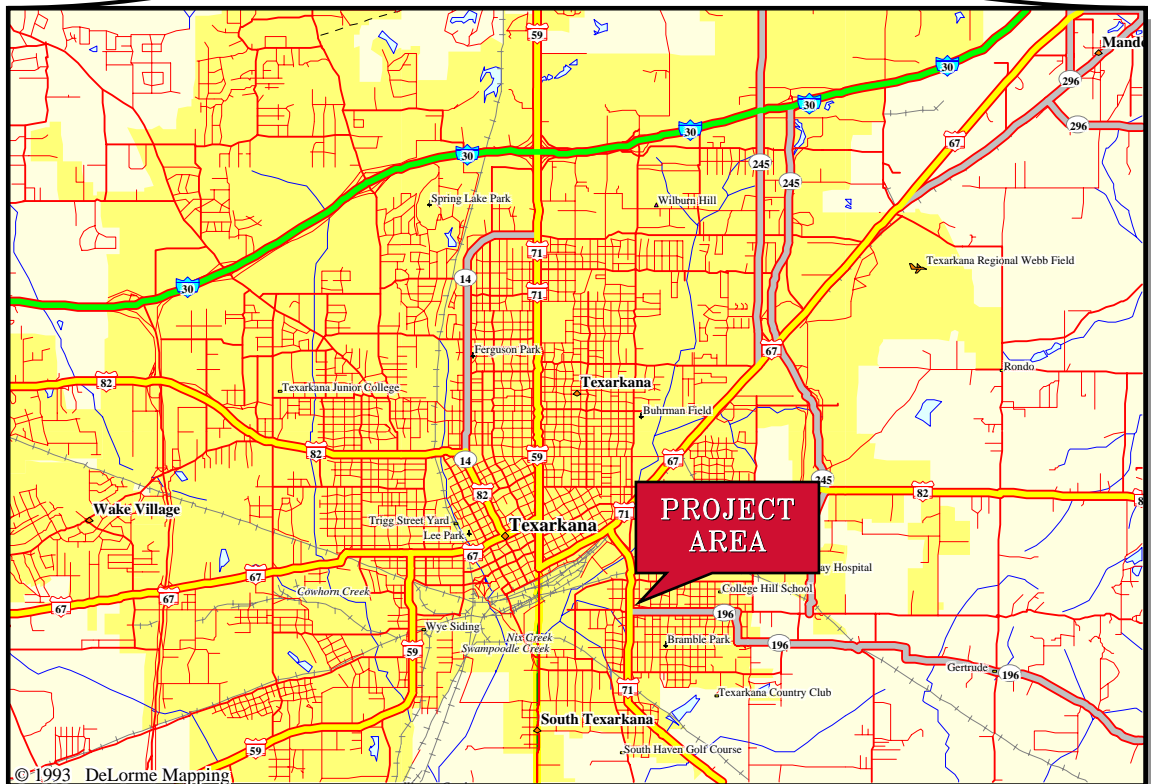
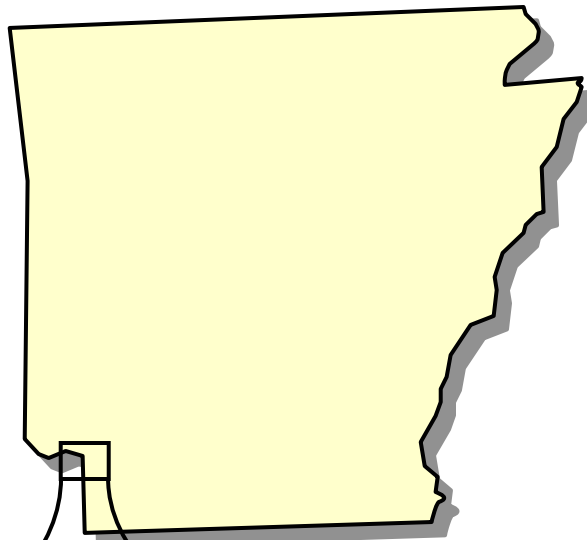
Pursuant to Public Law 106-31 (PL 106-31), the Emergency Supplemental Appropriations Act for Fiscal Year 1999, additional funding was provided to the Federal Emergency Management Agency (FEMA) to address disaster-related needs not met by federal disaster relief programs for communities that experienced declared major disasters in Fiscal Years 1998 and 1999. The State of Arkansas was awarded \$1,194,098 for this purpose, with the funds specifically designated for project needs resulting from severe thunderstorms, high winds, and tornadoes associated with the disaster, FEMA-1266-AR. As enabled by PL 106-31, the City of Texarkana has applied for funding from FEMA through the Arkansas Department of Emergency Management (ADEM) to implement specific measures to mitigate potential damages and losses to human health and property that could result from future flooding in the City of Texarkana, Arkansas. The City of Texarkana became eligible for assistance under the Hazard Mitigation Grant Program (HMGP), which is authorized by Section 404 of the Robert T. Stafford Act and FEMA's implementing regulations, which are set forth in Title 44, Code of Federal Regulations (CFR).

The National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500 through 1508), and FEMA regulations for NEPA compliance (44 CFR Part 10) direct FEMA and other federal agencies to be informed of and take into account during decision making, the environmental consequences of proposed federal actions (projects). In compliance with NEPA and its implementing regulations, FEMA has prepared this Environmental Assessment (EA) to analyze potential environmental impacts associated with alternatives that meet the stated purpose and need.

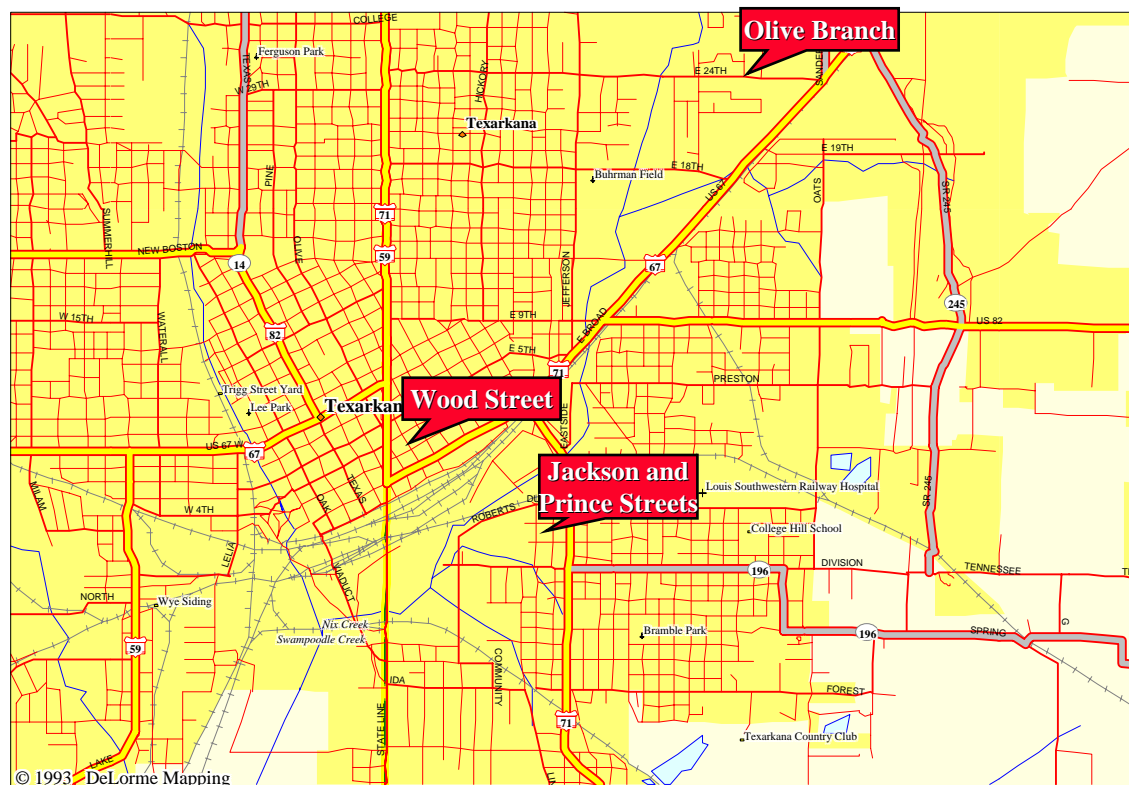
## **1.2 PROJECT LOCATION**


The three proposed project areas are located on the Arkansas side of the City of Texarkana within Miller County (Figure 1). Texarkana is a unique city because it is divided by the Arkansas/Texas boundary and is named for those states. The project areas are located along urban streets and the existing stormwater system (Figure 2).





CLIENT FEMA					TITLE Regional Map		
PROJ City of Texarkana, Arkansas							
REVISION NO		DES BY			URS		PROJ NO 89-FEMA4066
SCALE NOT TO SCALE		DR BY	DK	7/17/01			FIGURE 1
FILE Regional Map.PPT		CHK BY	RT	7/17/01			



CLIENT <b>FEMA</b>					TITLE  Vicinity Map	
PROJ <b>City of Texarkana, Arkansas</b>						
REVISION NO		DES BY				PROJ NO    89-FEMA4066
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### 1.3 PURPOSE AND NEED

In May of 1998, the City of Texarkana, Arkansas (Texarkana or Applicant) experienced a damaging and devastating, near 100-year storm event. Texarkana sustained extensive flooding as a result of heavy rains. Increased urbanization and undersized culverts that channel Nix Creek and its tributaries contributed to the flooding. A drainage study completed by NRS Consulting Engineers (NRS) in April of 1999, found drainage deficiencies along Nix Creek and its major tributaries, and recommended drainage improvements to relieve future flooding.

Under this HMGP application, three sites have been selected for drainage improvements: Wood Street, Olive Branch, and Jackson and Prince Streets (Figure 2). These improvements have been grouped together in this EA because of their similarities in scope and impact. Several businesses and homes in Texarkana continue to endure flooding because of the need for drainage improvements in the Nix Creek watershed. The proposed project would improve drainage in Nix Creek and its tributaries at Wood Street, Olive Branch, and Jackson and Prince Streets, reducing floodwater depths and future damages related to localized flooding.

In response to the high human health risk associated with the occurrence and scale of flooding in Texarkana, the City has proposed the implementation of specific measures to increase the stormwater conveyance capacity of drainage channels and has identified the need to provide greater flood protection to the residents of Texarkana.

### 1.4 EXISTING CONDITIONS

The three sites selected for flood mitigation are all within the city's existing stormwater management system. All three sites were originally designed to convey the 25-year storm; however, development in the city has reduced their effective capacity to roughly a 5-year storm event (Franks, pers. comm.). Currently the three sites have the following dimensions:

**Wood Street.** The Wood Street project site currently drains toward Nix Creek via an established stormsewer system. The existing stormsewer system consists of underground vitrified clay pipes of an unknown dimension. Currently, water flows south from the storm sewer system, then overland to an existing 4-foot by 4-foot reinforced box culvert under adjacent railroad tracks, and finally opens to an existing 10-foot wide channel that outfalls to Nix Creek.

**Olive Branch.** Olive Branch (a tributary of Oak Creek) begins north of Green Acre Drive and flows south. The existing culverts consist of three oval corrugated metal pipes, each with an opening of approximately 26 inches high by 40 inches wide. The channel upstream of the culverts is a 4-foot deep trapezoidal channel with 1:2 vertical:horizontal (V:H) side slopes. The channel downstream of the culvert runs due south and has the same dimensions. Approximately 350 feet south of East 24<sup>th</sup> Street, the channel takes a 90-degree turn to the east. The channel proceeds 250 feet due east, then turns 90 degrees due south. The channel joins another branch of Oak Creek 350 feet from the second 90 degree turn. There was no flow in Olive Branch at the time of the site visit by URS staff on July 17, 2001.

**Jackson and Prince Streets.** Hays Creek is a tributary of Nix Creek that begins at Draughn Street and flows west. At Jackson Street, the channel upstream of the culverts is a trapezoidal channel with a 5-foot bottom width, approximately 4-feet deep, with 1:2 V:H side slopes. The channel downstream of the box culvert runs northwest and has the same dimensions as the channel upstream of the crossing. At Prince Street, the channel upstream of the culverts is a

trapezoidal channel with a 6-foot bottom width, 4 to 5 feet in depth, and 1:1 V:H side slopes. The channel downstream of the box culvert runs northwest and has the same dimensions as the channel upstream of the crossing.

In compliance with NEPA guidelines, several alternatives were initially evaluated when considering methods of reducing flooding along Nix Creek and its tributaries in Texarkana. The environmental impacts and the effectiveness of these alternatives have been analyzed. This EA will analyze all three projects together as the Proposed Action because of their similarity of scope and impact to the built and natural environments.

## **2.1 ALTERNATIVE 1 – NO ACTION ALTERNATIVE**

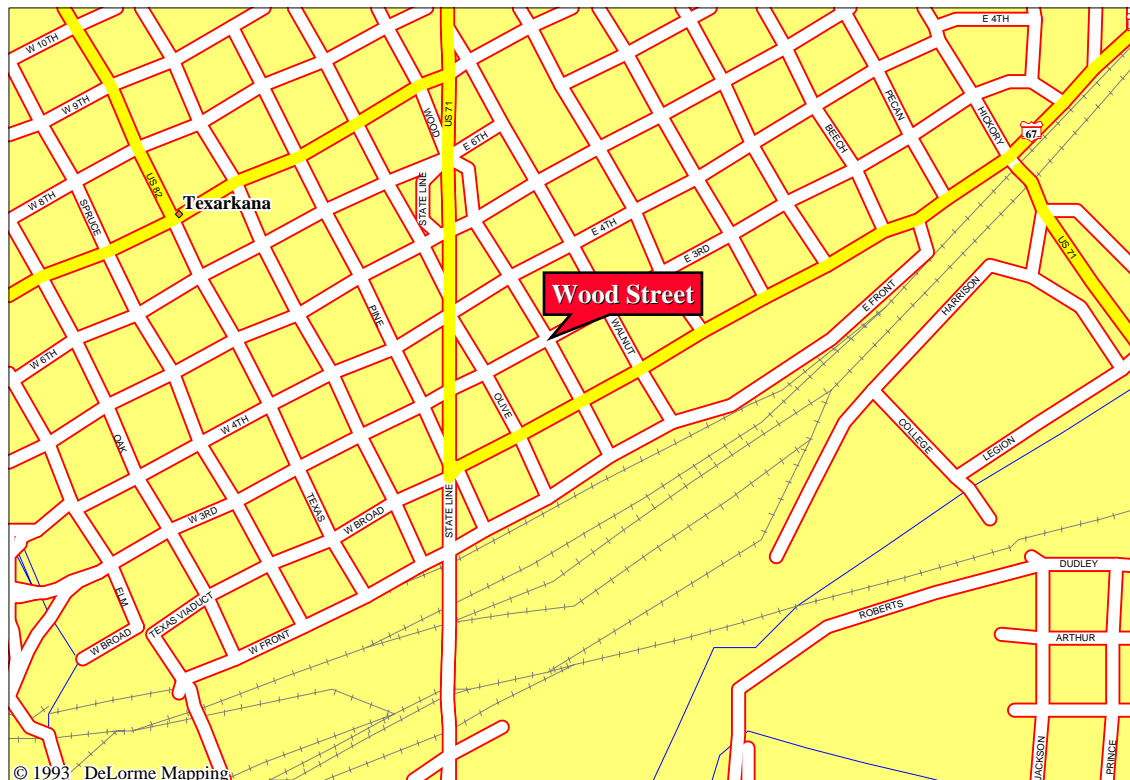
Under Alternative 1, there would be no construction and no measures would be taken to mitigate future flooding at Wood Street, Olive Branch, or Jackson and Prince Streets.


## **2.2 ALTERNATIVE 2 – 100-YEAR STORM DESIGN (PROPOSED ACTION)**

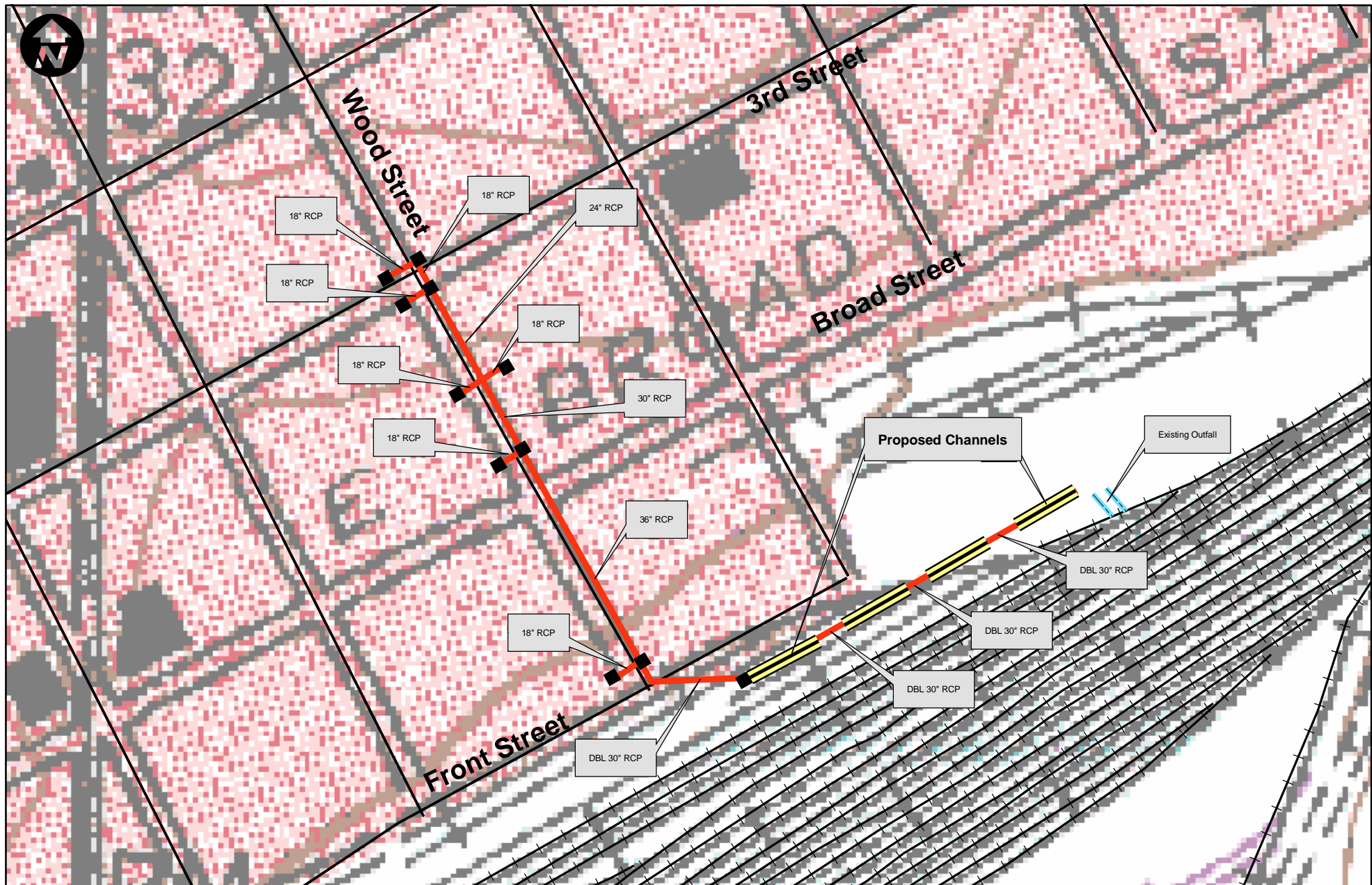
Under the Proposed Action, Texarkana would design and construct all three projects to contain stormwater discharges from a 100-year storm event. The proposed upgrades are as follows:

### ***Wood Street***

This project would upgrade the existing storm sewer system along a portion of Wood Street and Broad Street southward toward the existing railroad tracks (Figure 3). The upgrades would consist of installing various sized (18-to 36-inch) subsurface reinforced concrete pipes (RCPs) and 11 storm grates along Wood Street, just north of 3<sup>rd</sup> Street, connecting southeast to four proposed channel excavations. The proposed channels would be excavated to 19-foot top width, 4-foot bottom width, and 2.5 feet in depth and would be connected by three segments of double 30-inch RCP (Figure 4). The proposed excavations would extend from the southernmost part of Wood Street eastward to an existing outfall, which conveys water under the railroad tracks to Nix Creek. These improvements would provide more stormwater capacity during storm events and would reduce localized flooding such that an estimated three businesses would no longer be subjected to frequent flooding (Franks, pers. comm.). A total of approximately 1.59 acres would be disturbed, including excavation of the existing storm sewer system and proposed channels.



CLIENT    FEMA					TITLE  Wood Street Vicinity Map	
PROJ    City of Texarkana, Arkansas						
REVISION NO		DES BY				PROJ NO 89-FEMA4066
SCALE            NOT TO SCALE		DR BY	DK	7/17/01		FIGURE
FILE            Wood Street.PPT		CHK BY	RT	7/17/01		<b>3</b>



**Legend** USGS 7.5 Minute Quadrangle: Texarkana, Tex.- Ark.

- Proposed Channels
- RCP
- Railroad
- Streets
- Storm Grates

0 50 100 200 300 400 Feet

Client:	FEMA
Project:	City of Texarkana, Arkansas
Rev No:	
File:	G:\15292279\projects\wood.mxd

Title:	Wood Street Project Area
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**URS**

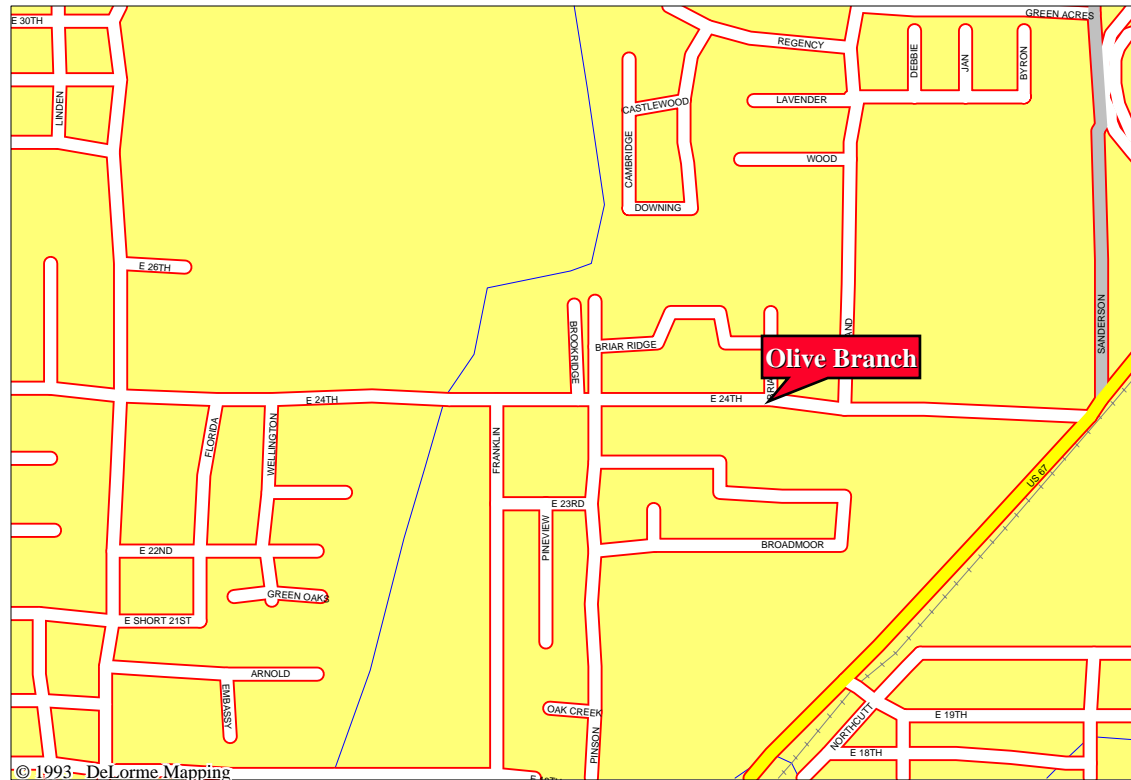
Figure:

4

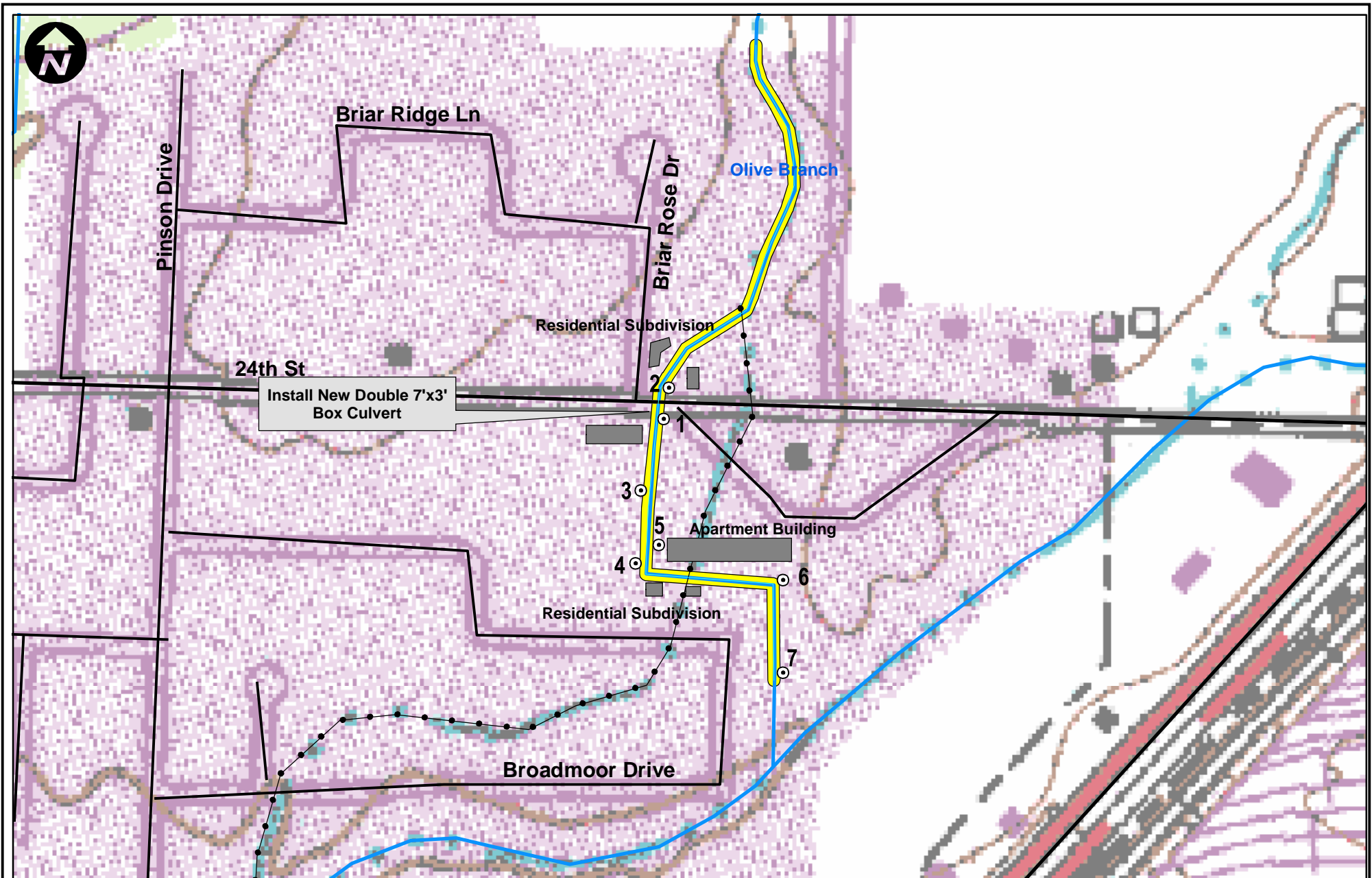
*Olive Branch*

This improvement would reduce floodwater depths in the Woodland Road and East 24<sup>th</sup> Street area (Figure 5). Improvements would include a double 7-foot by 3-foot reinforced box culvert spanning approximately 100 linear feet, and approximately 1,600 linear feet of slope shaping and channel-widening to the north and south of East 24<sup>th</sup> Street (Figure 6). Channel widening would vary from 5 to 25 feet. These improvements would reduce localized flooding such that an estimated 14 homes would no longer be subjected to frequent flooding (Franks, pers. comm.). Approximately 1.17 acres would be disturbed for this portion of the Proposed Action.





CLIENT    FEMA					TITLE                                    Olive Branch Vicinity Map	
PROJ       City of Texarkana, Arkansas						
REVISION NO		DES BY			<div>URS</div>	PROJ NO   89-FEMA4066
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# Legend

USGS 7.5 Minute Quadrangle: Texarkana, Tex.- Ark.

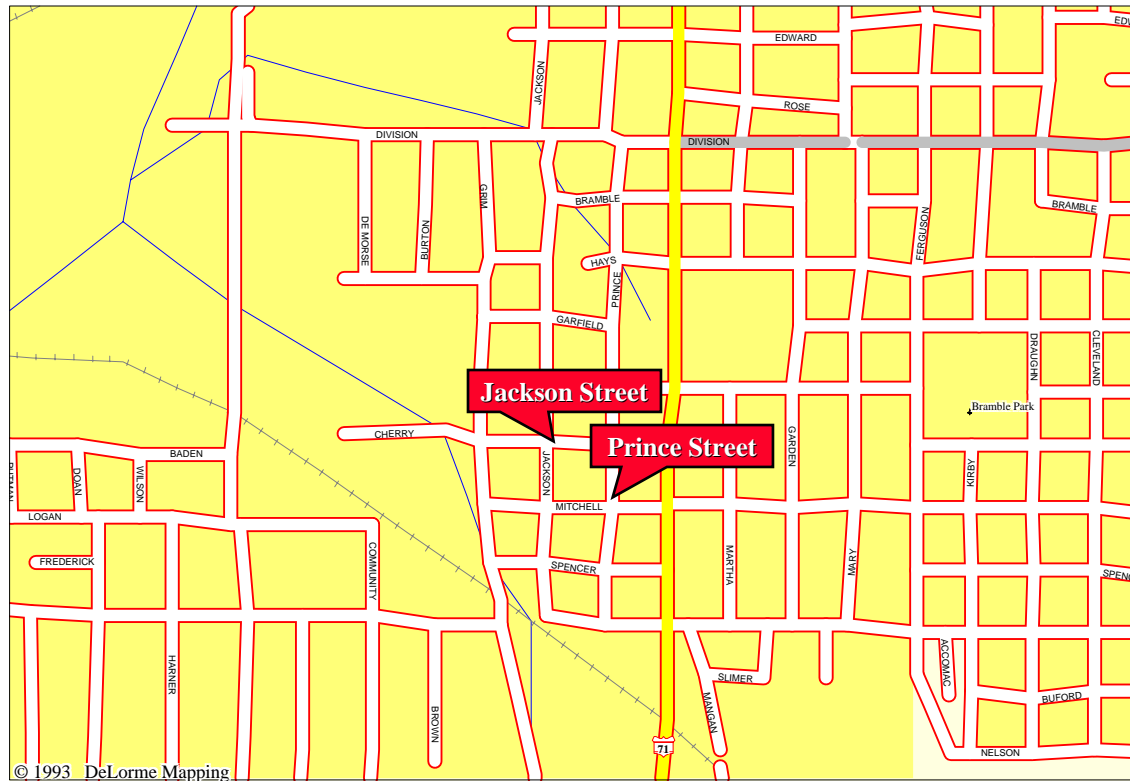
- Photo Locations
- Buildings
- Trace of Olive Creek per 1975 USGS Map
- Streets
- Channel Widening
- Olive Branch
- Railroad

0 50 100 200 300 400 Feet

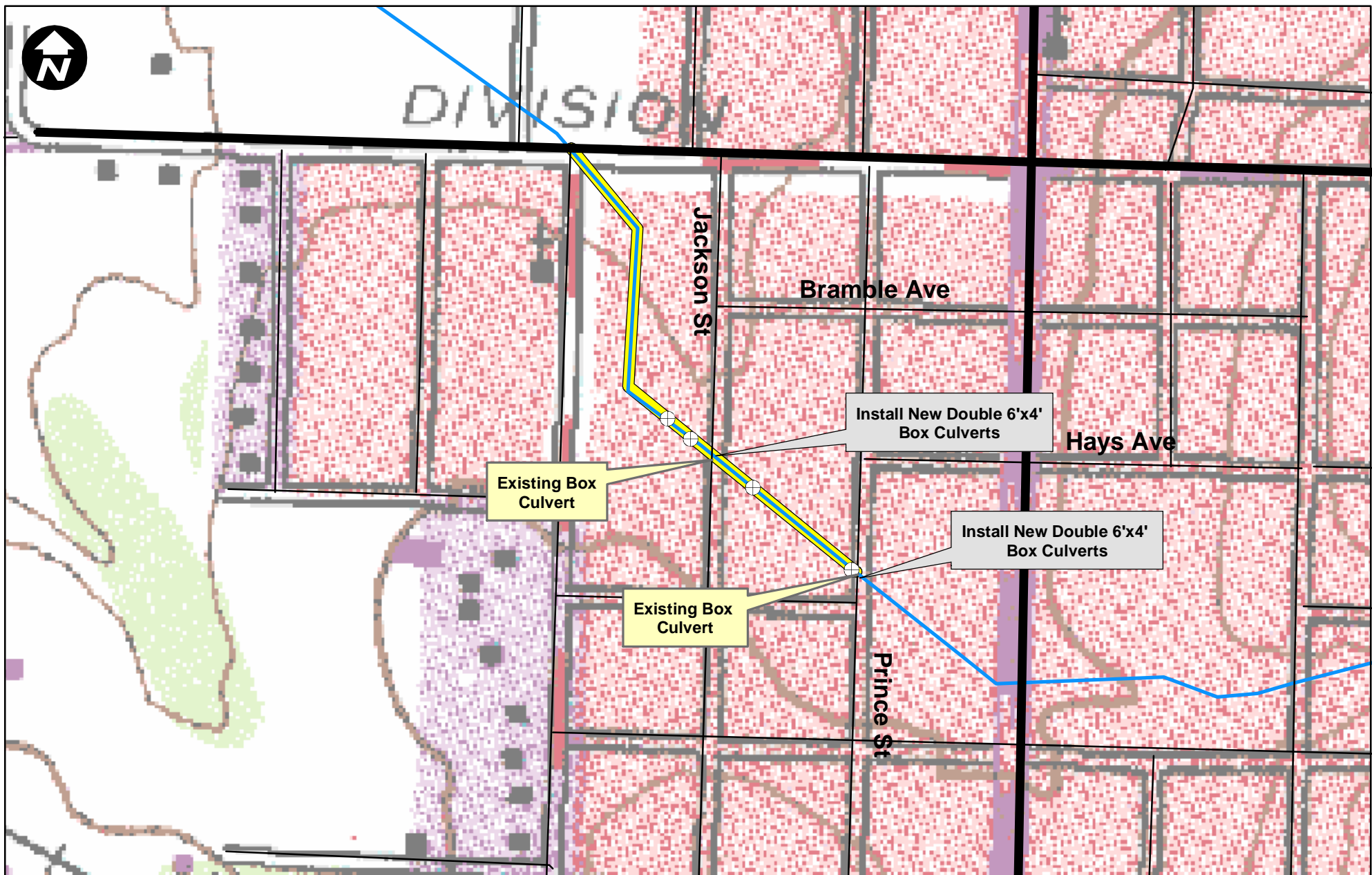
Client:	FEMA	Title:	Olive Branch Project Area
Project:	City of Texarkana, Arkansas		
Rev No:			Figure: 6
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*Jackson and Prince Streets*

This improvement would include the installation of double 6-foot by 4-foot concrete box culverts at Jackson Street and Prince Street, and 20 tons of asphaltic concrete to replace the road surface (Figure 7). These culverts are on Hays Creek and would reduce the floodwater depths in that area. Both culverts would be approximately 60 linear feet. Channel excavation, widening, and slope shaping would be performed from Division Street to east of Prince Street for approximately 1,300 linear feet (Figure 8). Channel widening would vary from 16 to 30 feet. These improvements would intersect locations where water and sewer pipelines cross Hays Creek. These pipelines would be relocated to a depth of 36 inches below the channel bottom; therefore, coordination with utility companies and the Texarkana Department of Public Works would be necessary for this project. These improvements would reduce localized flooding such that an estimated 17 homes would no longer be subject to frequent flooding (Franks, pers. comm.). Approximately 1.19 acres would be disturbed for this portion of the Proposed Action.



CLIENT    FEMA					TITLE                    Jackson and Prince Streets Vicinity Map	
PROJ        City of Texarkana, Arkansas						
REVISION NO		DES BY			<div>URS</div>	PROJ NO 89-FEMA4066
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**Legend** USGS 7.5 Minute Quadrangle: Texarkana, Tex. - Ark.

⊕ Locations where utility pipelines cross the creek  
 — Streets     Channel Widening    — Hays Creek

0 50 100 200 300 400 Feet

Client:	FEMA
Project:	City of Texarkana, Arkansas
Rev No:	
File:	G:\15292279\projects\jackprince.mxd

Title:	Jackson and Prince Streets Project Area
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**URS**

Figure:	8
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It is estimated that the risk of localized flooding to an estimated 31 homes and 3 businesses would be reduced as a result of the implementation of the Proposed Action. Standard construction equipment would be used for project activities. Equipment may include the use of a trackhoe or backhoe, dump trucks, a crane on the back of a flatbed truck, and road construction equipment. Equipment staging areas would be located in adjacent parking lots and maintained vacant fields. Following construction activities, exposed, compacted soils would be aerated and revegetated with native grasses as appropriate.

Construction times (from project start date to project closeout) would last approximately 240 days for the Wood Street site, approximately 210 days for the Olive Branch site, and approximately 270 days for the Jackson and Prince Street site.

## **2.3 ALTERNATIVES CONSIDERED AND DISMISSED**

Prior to submitting an application for HMGP funding from FEMA, the Applicant conducted an initial planning phase. The Applicant selected the Wood Street, Jackson and Prince Streets, and Olive Branch proposed project sites due to repetitive losses from localized flooding in these areas and the ability to reduce this flooding by implementing structural solutions. The initial planning included preliminary hydrologic and hydraulic (H&H) modeling of the project areas and analyses of city maps. Several alternatives were considered in this process. After the initial planning, the Applicant dismissed two alternatives from further consideration due to technical reasons. The available details of the two alternatives considered, and the reasons for dismissal, are discussed below.

### **2.3.1 Construction of Detention Ponds**

As an alternative to the Proposed Action, the Applicant considered constructing detention ponds to alleviate flooding. However, this alternative was dismissed from further consideration because suitable land required to construct detention ponds that could effectively reduce flooding and meet the purpose and need for the project was not available.

### **2.3.2 50-year Design**

Under the 50-year Design, the Applicant proposed construction of similar drainage structures at the same three project areas capable of containing and conveying 50-year storm flows. After detailed analyses, it was determined that the Proposed Action and the 50-year Design Alternative were not considerably different in design or benefits. At Wood Street, Jackson and Prince Streets, and Olive Branch, no difference in the reduction of flood depths occurred between the Proposed Action (100-year design) and the 50-year Design Alternative. Due to the similarities in design and benefits between the Proposed Action and the 50-year Design, the 50-year Design was dismissed and will not be analyzed further in the EA.

## SECTION THREE      Affected Environment and Environmental Consequences

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### 3.1      PHYSICAL ENVIRONMENT

#### 3.1.1      Geology, Seismicity, and Soils

**Geology:** The City of Texarkana, Arkansas is located in the Timberlands Region south of the Ozark Mountain Range. This area is characterized by gently rolling hills and rich forests. The elevations of the proposed project locations are approximately 300 feet National Geodetic Vertical Datum (NGVD). The project locations are within an urban landscape.

**Seismic Activity:** The primary geologic feature in the region is the New Madrid Seismic Zone, which extends from northeast Arkansas to southern Illinois. Historically, this area has been the site of some of the largest earthquakes in North America. However, this fault system is well outside of the project area. The project area is considered to be in Seismic Zone 1, which has a low risk for earthquakes (Conley, pers. comm.). Seismic Zone 1 stands for the level of damage that could be expected during an earthquake; it corresponds to intensities V and VI (minor damage) on the modified Mercalli Intensity Scale. Executive Order (EO) 12699, Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction, would not apply because building construction would not occur under the proposed action.

**Soils:** According to the soil survey of Miller County, Arkansas, from the U.S. Department of Agriculture Soil Conservation Service (USDA/SCS, 1981), the soils found in the Texarkana area are as follows: Severn Soils, Kiomatia Soils, Oklared Soils, Billyhaw Soils, Perry Soils, Rilla Soils, Caspiana Soils, Gladewater Soils, Amy Soils, Sacul Soils, Eylau Soils, Sawyer Soils, Bowie Soils, Wrightsville Soils, and Muskogee Soils. These soils range from well-drained to poorly drained.

**Prime and Unique Farmland:** The Farmland Protection Policy Act (FPPA) (PL 97-98, Sec 1539-1549; 7 United States Code [USC] 4201, et seq.) was enacted in 1981 to minimize the unnecessary conversion of farmland to non-agricultural uses as a result of federal actions. Programs administered by federal agencies must be compatible with state and local farmland protection policies and programs. The USDA Natural Resources Conservation Service (NRCS) is responsible for protecting significant agricultural lands from irreversible conversions that result in the loss of an essential food or environmental resource.

Prime farmland is characterized as land with the best physical and chemical characteristics for the production of food, feed, forage, fiber, and oilseed crops. This land is either used for food or fiber crops or is available for those crops, but is not urban, built-up land, or water areas. The soil qualities, growing season, and moisture supply are those necessary for a well-managed soil to economically produce a sustained high yield of crops. Unique farmlands are lands that are suitable for the production of high-value crops or high yields of a specific crop(s).

There are no prime, unique or special farmland impacts within the project areas. The project is located in a developed urban landscape; therefore, no prime or unique farmland would be affected and coordination with NRCS is not required. Additionally, a response letter from the NRCS confirms that since these improvements are located within an area zoned for urban/residential use, there will be no impact on prime, unique, or special farmland (Appendix A).

## **SECTION THREE**      **Affected Environment and Environmental Consequences**

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### **Alternative 1 – No Action Alternative**

Under Alternative 1, geology, seismicity, and soils at the project sites would not be affected because no construction would occur. Flooding would continue as it has historically.

### **Alternative 2 – 100-Year Storm Design (Proposed Action)**

The Proposed Action is not anticipated to adversely impact geology, seismicity, or soils because the project areas are within established drainage ways.

The use of construction equipment and the ground-disturbing phases of the project have the potential to result in temporary soil erosion. During construction approximately 3.95 acres would be disturbed. If project activities include the stockpiling of soil or fill on-site, the Applicant would cover these soils to help prevent fugitive dust and erosion into stormwater pathways. The Applicant would employ soil erosion mitigation measures, including the temporary installation of silt fences and/or hay bales, and the staging of construction equipment in existing developed areas, such as paved parking lots, to reduce runoff and soil erosion from the project area. Following construction activities, exposed, compacted soils would be aerated and revegetated with native grasses as appropriate to prevent future soil erosion.

#### **3.1.2 Water Resources and Water Quality**

The project area is located in the Lower Sulphur River watershed. The nearest available water quality information from the U.S. Environmental Protection Agency (EPA) is for the Red River and Sulphur River, which merge southeast of Texarkana. According to the EPA, both of these water resources have “less serious water quality problems and a low vulnerability to stressors” (EPA, 1998). Nix Creek is the main water resource in the project area. Nix Creek and its tributaries traverse Texarkana. No water quality data were available for these tributaries. All creeks within Texarkana collect and convey city stormwater runoff from residential, commercial, and industrial properties.

Texarkana is located above the Mississippi embayment aquifer system. Texarkana Water Utilities extracts water from this aquifer and distributes it to both the Arkansas and Texas portions of Texarkana.

An initial H&H analysis was conducted in 2000 by NRS for the proposed projects followed by a professional determination. The professional determination, dated March 22, 2004, determined that the proposed project would provide reduced floodwater elevations and/or protect property from the threat of localized flooding. In addition, it states that the designs would have no negative effect upstream or downstream of the improved areas for the designed storm event (Appendix A).

**Wild and Scenic Rivers:** The Federal Wild and Scenic Rivers Act (16 U.S.C. § 1271-1287; PL 90452, as amended), was established to preserve the free-flowing state of listed rivers or those under consideration for inclusion due to numerous values, such as scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values. The Act restricts development within 1,000 feet of rivers identified as wild and scenic. According to the National Park Service (NPS), the project area is not located near a federally designated wild and scenic waterway (NPS, 2003).



## **SECTION THREE      Affected Environment and Environmental Consequences**

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### **Alternative 1 – No Action Alternative**

Under Alternative 1, no construction would occur. Flooding would continue, potentially causing additional soil erosion and flooding of homes and businesses. During flooding events exposed water and sewer pipelines on Hays Creek could rupture, negatively impacting water resources.

### **Alternative 2 – 100-Year Storm Design (Proposed Action)**

Implementation of all three projects under Alternative 2 is not anticipated to result in adverse impacts to water resources and water quality. Sedimentation and associated pollutants may enter the stormwater discharge pathway as soils are disturbed during the construction process. However, implementation of soil erosion mitigation measures outlined in Section 3.1.1, Geology, Seismicity and Soils, would reduce the potential for sediments and pollutants associated with construction to enter stormwater flow.

In compliance with the Clean Water Act (33 U.S.C. 1251 et seq.) and the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et seq.), a National Pollutant Discharge Elimination System (NPDES) permit is required for construction activities disturbing more than 1 acre. In a letter dated March 10, 2003, the Arkansas Department of Environmental Quality (ADEQ) stated that construction sites disturbing 1 or more acres will be required to obtain a stormwater permit, and a letter must be written to the ADEQ by the Applicant requesting permit coverage (Appendix A). It is anticipated that Wood Street, Olive Branch, and Jackson and Prince Streets would each need an NPDES permit from ADEQ. Prior to construction, the Applicant would obtain a stormwater permit through the ADEQ for project sites that disturb more than 1 acre.

### **3.1.3 Floodplain Management (Executive Order 11988)**

Floodplains generally refer to 100-year floodplains as set by FEMA and are shown on Flood Insurance Rate Maps (FIRM) or Flood Hazard Boundary Maps (FHBM) for all communities that participate in the National Flood Insurance Program (NFIP). The 100-year floodplain designates the area inundated during a storm having a 1.0 percent chance of occurrence in any given year. FEMA also identifies the 500-year floodplain. The 500-year floodplain designates the area inundated during a storm having a 0.2 percent chance of occurrence in any given year.

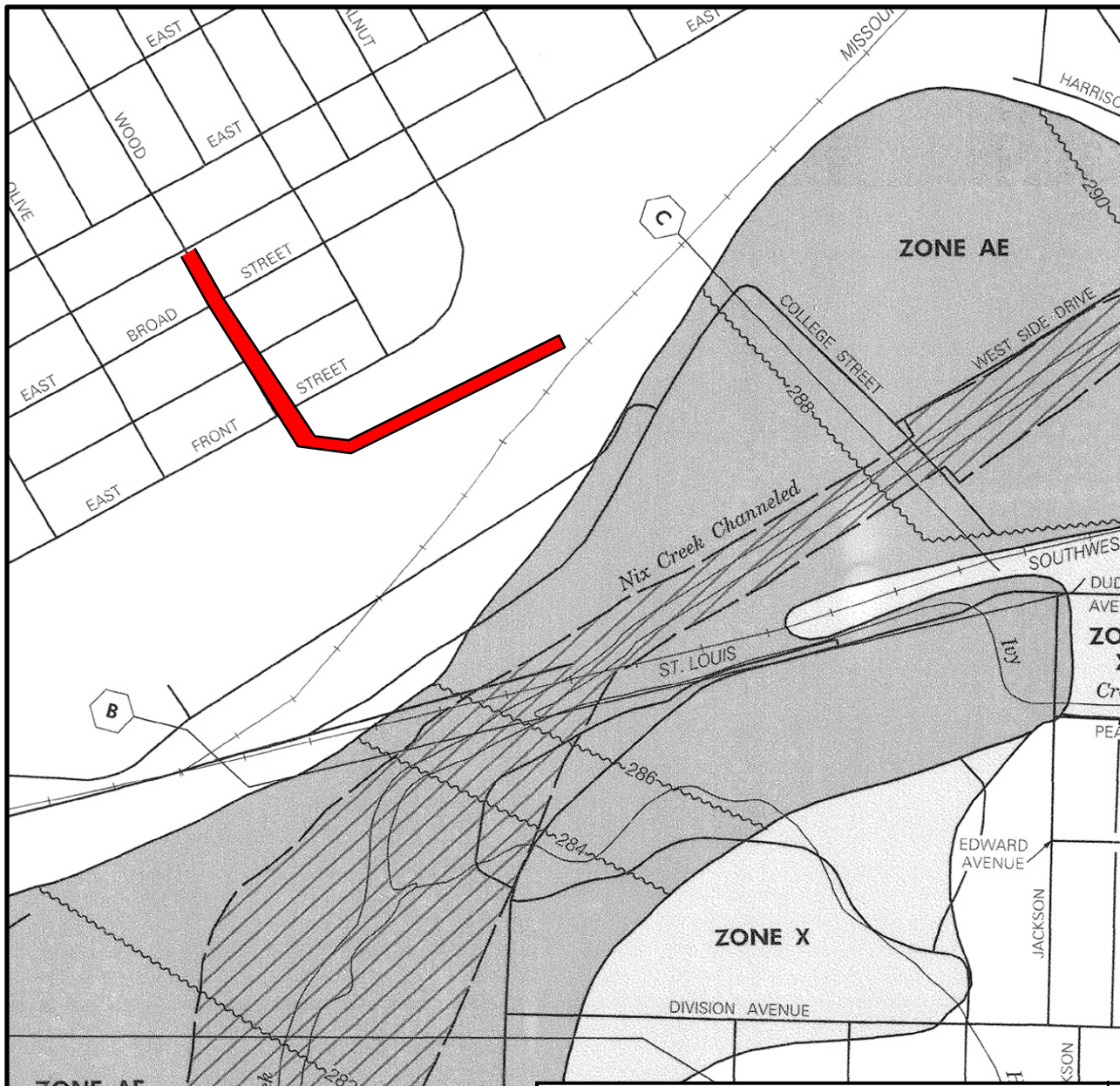
EO 11988 (Floodplain Management) requires federal agencies to minimize occupancy of and modification to the floodplain. Specifically, EO 11988 prohibits federal agencies from funding construction in the 100-year floodplain unless there are no practicable alternatives. FEMA's regulations for complying with EO 11988 are promulgated in 44 CFR Part 9. FEMA applies the Eight-Step Planning Process as required by regulation to meet the requirements of EO 11988. A step-by-step analysis of the Eight-Step Planning Process, as applied to this EA, is included in Appendix B of this document.

Texarkana participates in the NFIP. The Olive Branch project location is located within the 100-year floodplain; Wood Street and Jackson and Prince Streets projects are not within the 100-year floodplain. FIRM community panel numbers 0501370066 C and 0501370059 C were reviewed to make these determinations (FEMA, 2001). These FIRMs are included as Figures 9, 10, and 11.

## **SECTION THREE      Affected Environment and Environmental Consequences**

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Mr. Stephen Hughes, City Manager of Texarkana and local Floodplain Administrator, sent a letter (no date) to the State Office of Emergency Services stating that the city will: provide the specified amount of local funds or in-kind services and commit to the maintenance cost associated with this project; comply with all provisions of the Uniform Relocation Act, where applicable; and secure all necessary easements for the construction of this project (Appendix A).



APPROXIMATE SCALE IN FEET  
500 0 500

NATIONAL FLOOD INSURANCE PROGRAM

# **FIRM** FLOOD INSURANCE RATE MAP

CITY OF  
TEXARKANA,  
ARKANSAS  
MILLER COUNTY

PANEL 66 OF 100  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

 Wood Street Project Area

COMMUNITY-PANEL NUMBER  
0501370066 C

MAP REVISED:  
JULY 5, 2001



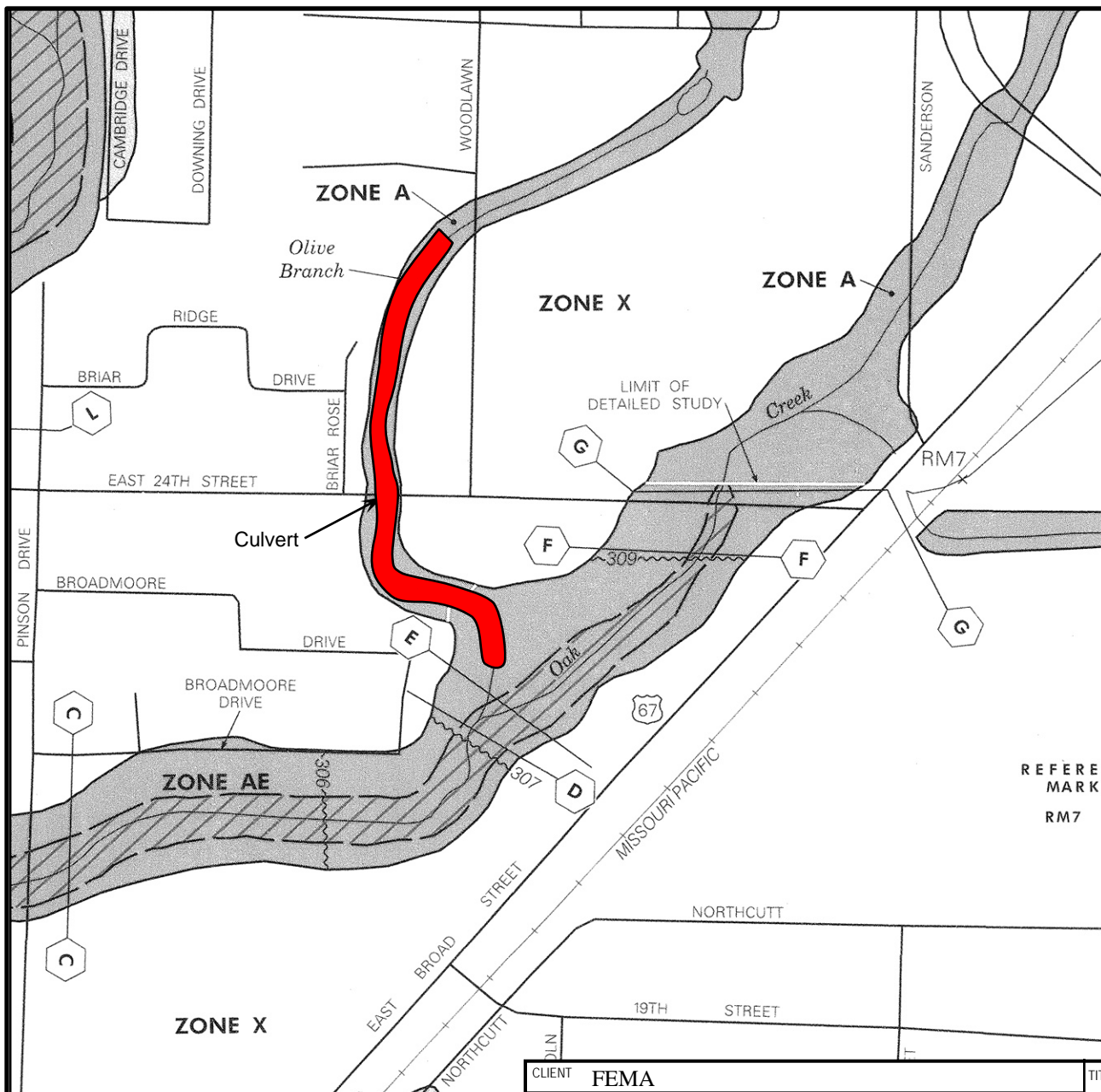
Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

CLIENT <b>FEMA</b>				
PROJ <b>City of Texarkana, Arkansas</b>				
REVISION NO	DES BY			
SCALE	NOT TO SCALE	DR BY	BR	1-15-03
FILE	MAPS.PPT	CHK BY	HG	1-15-03

TITLE <b>Wood Street Flood Insurance Rate Map</b>	
<b>URS</b>	PROJ NO 15292279
	FIGURE <b>9</b>





APPROXIMATE SCALE IN FEET  
500 0 500

NATIONAL FLOOD INSURANCE PROGRAM

# **FIRM FLOOD INSURANCE RATE MAP**

CITY OF  
TEXARKANA,  
ARKANSAS  
MILLER COUNTY

PANEL 59 OF 100  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

 Olive Branch Project Area

COMMUNITY-PANEL NUMBER  
0501370059 C

MAP REVISED:  
JULY 5, 2001



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the

CLIENT	FEMA				
PROJ	City of Texarkana, Arkansas				
REVISION NO		DES BY			
SCALE	NOT TO SCALE	DR BY	BR		1-15-03
FILE	MAPS.PPT	CHK BY	HG		1-15-03


TITLE **Olive Branch Flood Insurance Rate Map**

# **URS**

PROJ NO 15292279

FIGURE  
**10**




  
 APPROXIMATE SCALE IN FEET  
 500 0 500

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**NATIONAL FLOOD INSURANCE PROGRAM**  
  
**FIRM**  
**FLOOD INSURANCE RATE MAP**  
  
 CITY OF  
 TEXARKANA,  
 ARKANSAS  
 MILLER COUNTY

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**PANEL 66 OF 100**  
(SEE MAP INDEX FOR PANELS NOT PRINTED)  
  
 Jackson and Prince Streets  
 Project Area

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**COMMUNITY-PANEL NUMBER**  
**0501370066 C**  
  
**MAP REVISED:**  
**JULY 5, 2001**

  
 Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes

CLIENT <b>FEMA</b>				
PROJ <b>City of Texarkana, Arkansas</b>				
REVISION NO	DES BY			
SCALE	NOT TO SCALE	DR BY	BR	1-15-03
FILE	MAPS.PPT	CHK BY	HG	1-15-03

TITLE **Jackson and Prince Streets Flood Insurance Rate Map**

**URS**

PROJ NO 15292279  
FIGURE 11

## **SECTION THREE**      **Affected Environment and Environmental Consequences**

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### **Alternative 1 – No Action Alternative**

Under Alternative 1, no construction would occur and flooding would continue as it has historically.

### **Alternative 2 – 100-Year Storm Design (Proposed Action)**

The Olive Branch portion of the Proposed Action would involve construction within the 100-year floodplain. According to the HMGP application, numerous homes and businesses would experience a reduction in localized flooding overall if the Proposed Action is implemented. Approximately three businesses would no longer be subject to frequent flooding at the Wood Street site; approximately 14 homes at Olive Branch, and 17 homes at Jackson and Prince Streets would no longer be subjected to frequent flooding (City of Texarkana, 2000a, 2000b, 2000c, 2000d; Irvin, pers. comm.). In a letter dated March 22, 2004, NRS stated that the proposed projects would have no negative effect upstream or downstream of the improvement areas (Appendix A).

The Applicant would coordinate with the local floodplain administrator for possible local permits or approvals prior to construction.

#### **3.1.4 Air Quality**

The Clean Air Act (CAA), as amended, requires the EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The CAA established two types of national air quality standards. Primary standards set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, and damage to animals, crops, vegetation, and buildings.

The EPA Office of Air Quality Planning and Standards has set NAAQS for six principal pollutants called “criteria” pollutants. They include: carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), lead (Pb), particulate matter less than or equal to 10 microns (PM<sub>10</sub>), and sulfur dioxide (SO<sub>2</sub>). The state of Arkansas is in attainment for all six criteria pollutants monitored by the EPA (EPA, 2003).

### **Alternative 1 – No Action Alternative**

Alternative 1 would not impact air quality because no construction would occur.

### **Alternative 2 – 100-Year Storm Design (Proposed Action)**

Moderate construction, as would occur under the Proposed Action, is a source of fugitive dust emissions that may have temporary impacts on local air quality. Fugitive dust emissions during construction can be associated with ground excavation and earth moving activities. A large portion of the emissions results from equipment and vehicular traffic during construction. To reduce temporary impacts to air quality, the Applicant would be required to water down construction areas when necessary. Emissions from fuel-burning internal combustion engines (e.g., heavy equipment and earthmoving machinery) could temporarily increase the levels of



## SECTION THREE Affected Environment and Environmental Consequences

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some criteria pollutants, including CO, NO<sub>2</sub>, O<sub>3</sub>, PM<sub>10</sub>, and non-criteria pollutants such as volatile organic compounds (VOCs). These increases would be temporary. To reduce emissions of criteria pollutants, fuel-burning equipment running times would be kept to a minimum and engines would be properly maintained. No long-term impacts to air quality are anticipated as a result of the Proposed Action.

### 3.2 BIOLOGICAL ENVIRONMENT

#### 3.2.1 Terrestrial and Aquatic Environment

**Wood Street.** The project area at Wood Street and southward consists of commercial buildings, roads, and sidewalks until Front Street. The project area to the east between Front Street and the railroad tracks consists of a vacant lot with mixed vegetation, railroad tracks, and gravel, until it joins with the outfall to the east. The dominant vegetation at the project area consists of dallis grass (*Paspalum dilatatum*), Johnson grass (*Sorghum halepense*), Bermuda grass (*Cynodon dactylon*), horseweed (*Erigeron canadensis*), goat weed (*Croton capitatus*), black-eyed Susan (*Rudbeckia serotina*), broad-leaved cattail (*Typha latifolia*), black willow (*Salix nigra*), silktree (*Albizia julibrissin*), nightshade (*Solanum* sp.), sandbur (*Cenchrus tribuloides*), and ivy-leaved morning glory (*Ipomoea hederacea*). The existing outfall on the east end of the project area contains broad-leaved cattail and black willow. Although a comprehensive faunal survey was not conducted, no wildlife was observed at the project site during the site visit conducted by URS staff in June 2001. The Wood Street project area normally remains dry (except during rain events) and does not sustain a permanent aquatic environment.

**Olive Branch.** Residential lawns characterize the area outside the banks of Olive Branch, and consist of loblolly pine (*Pinus taeda*), St. Augustine Grass (*Stenotaphrum secundatum*), and Bermuda grass. South of East 24<sup>th</sup> Street at the eastern turn of Olive Branch, the plant community outside the banks of Olive Branch becomes more diverse. The dominant plant species outside the banks consist of giant ragweed (*Ambrosia trifida*), Johnson grass, pepper-vine (*Ampelopsis arborea*), southern arrowwood (*Viburnum dentatum*), horseweed (*Erigeron canadensis*), silktree, blackberry vine, and possumhaw (*Ilex decidua*). The dominant vegetation within the bed of Olive Branch at the project site includes alligator weed and overlook hedge hyssop (*Hyssopus officinalis*). Southward from East 24<sup>th</sup> Street into the eastern turn of Olive Branch, the plant community within the bed of Olive Branch becomes more diverse, with the dominant plant species consisting of alligator weed, overlook hedge hyssop, buttonbush (*Cephalanthus occidentalis*), fox sedge (*Carex vulpinoidea*), and Asiatic dayflower (*Commelina communis*). The majority of the project area at Olive Branch consists of residential communities that provides limited wildlife habitat. Although a comprehensive faunal survey was not conducted, no wildlife was observed at the project site during the site visit conducted by URS in June 2001.

The project area of Olive Branch consists of a drainage channel, which remains dry (except during rain events) and does not sustain a permanent aquatic environment.

**Jackson and Prince Streets.** Residential lawns characterize the area outside the banks of Hays Creek and consist mostly of St. Augustine grass, Bermuda grass, loblolly pine, pecan, American sycamore (*Platanus occidentalis*), sugar hackberry (*Celtis laevigata*), and sweetgum. The dominant plant species on the banks of Hays Creek consist of giant ragweed, Johnson grass,

## **SECTION THREE**      **Affected Environment and Environmental Consequences**

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horseweed, silktree, poison ivy (*Toxicodendron radicans*), Carolina basswood (*Tilia caroliniana*), Chinese tallow tree, and possumhaw. The dominant vegetation within the bed of Hays Creek at the project site includes alligator weed and Asiatic dayflower. The majority of the project area at Jackson and Prince Streets consists of residential communities that provide limited wildlife habitat. Although a comprehensive faunal survey was not conducted, no wildlife was observed at the project site during the site visit conducted by URS in June 2001.

Hays Creek, a drainage tributary of Nix Creek is located at Draughn Street and flows west into Nix Creek. Hays Creek consists of a drainage channel in which the water level remains very low to dry unless it rains, and therefore does not sustain a permanent aquatic environment.

### ***Migratory Bird Treaty Act***

The Migratory Bird Treaty Act (MBTA) prohibits the taking of migratory birds, nests, and eggs, except as permitted by the U.S. Fish and Wildlife Service (USFWS). A migratory bird is defined as “any species or family of birds that live, reproduce, or migrate within or across international borders at some point during their annual life cycle.” There are currently 836 species of migratory birds protected under the MBTA (USFWS, 2002). The USFWS Arkansas Ecological Services Field Office did not comment on migratory birds or the MBTA in their July 31, 2001 response (Appendix A); therefore, it is not anticipated that migratory birds would be impacted and the MBTA will not be discussed further in this EA.

### **Alternative 1 - No Action Alternative**

Under Alternative 1, no construction would occur. Therefore, this alternative would not impact terrestrial or aquatic resources.

### **Alternative 2 – 100-Year Storm Design (Proposed Action)**

**Wood Street.** This alternative would result in the loss of a portion of a vacant grassy lot and of vegetation at the existing outfall. This alternative would not result in adverse impacts to terrestrial or aquatic resources.

**Olive Branch.** This alternative would result in the minor loss of community lawns and vegetation, including a number of loblolly pine trees in the right-of-way. This alternative would result in minor, temporary impacts to biological resources.

**Jackson and Prince Streets.** This alternative would result in the minor loss of community lawns and vegetation along and within the banks of Hays Creek at the project area. As such, this alternative would result in minor impacts to biological resources.

All project sites would be revegetated with native grasses. To minimize the impacts to trees outside the project right-of-way, the Applicant would place temporary fences around tree driplines to prevent the encroachment of construction personnel and equipment on tree root systems.



## **SECTION THREE**      **Affected Environment and Environmental Consequences**

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### **3.2.2 Wetlands (Executive Order 11990)**

EO 11990, Protection of Wetlands, requires federal agencies to take action to minimize the loss of wetlands. The NEPA compliance process requires federal agencies to consider direct and indirect impacts to wetlands that may result from federally funded actions. National Wetland Inventory (NWI) maps for Texarkana were not accessed; instead, URS staff visited the project sites on July 17, 2001, and identified wetland vegetation. The areas of wetland vegetation are not abundant and are non-jurisdictional. In a letter dated January 24, 2003, the U.S. Army Corps of Engineers (USACE) was consulted regarding Section 404 of the Clean Water Act (Appendix A).

FEMA applies the Eight-Step Decision-Making Process, required by 44 CFR Part 9, to meet the requirements of EO 11990. This step-by-step analysis was completed for this project regardless of the fact that there are no jurisdictional wetlands in any of the project areas (Appendix B).

**Wood Street.** The existing outfall on the east end of the project area contains wetland plant species. A letter from the USACE dated March 13, 2003, states that pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act, a Department of the Army permit will not be required for this project (Appendix A).

**Olive Branch.** A letter from the USACE dated March 13, 2003, states that this project will be authorized by Nationwide Permit No. 3, provided the activity complies with Nationwide Permit General Conditions and Regional Conditions (Appendix A).

**Jackson and Prince Streets.** A letter from the USACE dated March 13, 2003, states that pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act, a Department of the Army permit will not be required for this project.

### **Alternative 1 - No Action Alternative**

Under Alternative 1, no construction would occur. Therefore, there would be no direct or indirect impacts to wetlands.

### **Alternative 2 – 100-Year Storm Design (Proposed Action)**

The Proposed Action would result in the short-term loss of nonjurisdictional wetland vegetation at the Wood Street project area (a minor impact to wetland resources). It is anticipated that wetland vegetation would reestablish itself following construction. Soil erosion control measures such as those described in Section 3.1.1, Geology, Seismicity, and Soils, would be implemented to reduce the potential for site sedimentation and associated pollutants to enter stormwater runoff. These erosion measures would prevent sediments from impacting wetlands that may be present downstream of all the project areas. Therefore, this alternative complies with EO 11990. The Applicant would comply with Nationwide Permit General Conditions and Regional Conditions for the Olive Branch project.

### **3.2.3 Threatened and Endangered Species**

The Endangered Species Act (ESA) of 1973 requires federal agencies to determine the effects of their actions on threatened and endangered species of fish, wildlife, and plants, and their habitats, and take steps to conserve and protect these species. On July 6, 2001, the Arkansas Ecological Services Field Office of the USFWS was contacted to obtain a list of species that were

## **SECTION THREE**      **Affected Environment and Environmental Consequences**

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endangered or threatened, proposed for listing as endangered or threatened, or considered to be candidates for listing by the federal Endangered Species Act. In a letter dated June 4, 2003, the Arkansas Ecological Services Field Office stated that no federally listed endangered, threatened, or candidate species are present in the project area. (Appendix A). In compliance with the Fish and Wildlife Coordination Act, the Arkansas Natural Heritage Commission (ANHC) was also contacted.

The ANHC provided a list of threatened and endangered species for Miller County, Arkansas (Appendix A). Although there are no known federal or state threatened or endangered species of plants or animals in Miller County, the list shows the plants and animals listed as Inventory Elements; the ANHC is currently conducting active inventory work on these elements. There were no known plant species from ANHC's list observed at the site.

The project area consists of primarily residential and commercial lands and has limited value as habitat.

### **Alternative 1 - No Action Alternative**

Under Alternative 1, no construction would occur and there would be no impact to threatened or endangered species.

### **Alternative 2 – 100-Year Storm Design (Proposed Action)**

The project areas do not contain suitable habitat for federally listed special status species, nor are these species anticipated to occur in the project areas. Therefore, the Proposed Action is not anticipated to result in adverse impacts to threatened or endangered species.

## **3.3 HAZARDOUS MATERIALS**

URS staff conducted a reconnaissance level survey for hazardous materials and wastes at the project locations and vicinity on July 17, 2001. The visit concluded that no hazardous materials exist at any of the project areas. However, the project areas are within previously disturbed lands and urban creeks, which can be prone to illegal dumping. While the subsurface disturbance is expected to remain shallow, the potential to unearth hazardous materials or wastes during earthmoving activities exists. No subsurface hazardous material testing was conducted as part of this EA; however, based on the historical use as residential neighborhoods, commercial parking lots, and creek crossings, no subsurface hazardous materials are anticipated to be present.

### **Alternative 1 – No Action Alternative**

Under Alternative 1, no construction would occur. Therefore, there would be no adverse impacts resulting from hazardous materials.

### **Alternative 2 – 100-Year Storm Design (Proposed Action)**

Under the Proposed Action, no impacts to hazardous materials or wastes are anticipated. Although subsurface hazardous materials are not anticipated to be present, excavation activities could expose or otherwise affect subsurface hazardous wastes or materials. Any hazardous

## **SECTION THREE**      **Affected Environment and Environmental Consequences**

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materials discovered, generated, or used during implementation of the Proposed Action would be disposed of and handled by the Applicant in accordance with applicable local, state, and federal regulations.

### **3.4 SOCIOECONOMICS**

#### **3.4.1 Zoning and Land Use**

The three project areas are located in the urbanized City of Texarkana. Wood Street is primarily zoned as commercial, while Olive Branch and Jackson and Prince Streets are primarily zoned as residential with some commercial.

#### **Alternative 1 – No Action Alternative**

Under Alternative 1, no construction would occur. Therefore, there would be no impact to current zoning and land use patterns as no changes to the area would take place.

#### **Alternative 2 – 100-Year Storm Design (Proposed Action)**

It is not anticipated that the Proposed Action would result in any alterations to zoning or land use in Texarkana. All three proposed projects are improvements to current drainage systems; therefore, no new land uses would be introduced. The Proposed Action would not require the relocation of any residences or businesses; alter surface transportation patterns; divide or disrupt established communities; disrupt orderly, planned development; or cause an appreciable change in employment.

#### **3.4.2 Visual Resources**

Visual resources refer to the landscape character (what is seen), visual sensitivity (human preferences and values regarding what is seen), scenic integrity (degree of intactness and wholeness in landscape character), and landscape visibility (relative distances of seen areas) of a geographically defined viewshed.

The landscape character of the project areas is generally residential and commercial development. The project areas would be considered to possess a high degree of visual fragmentation due to the presence of an extensive road network and railways. The primary constituents in the viewshed of the project areas are the adjacent property owners and vehicular traffic.

It is anticipated that Alternative 1 (No Action) and Alternative 2 (Proposed Action) would have no impacts to visual resources, as these alternatives would be conducted on urban stormwater drainage systems that already exist.

#### **3.4.3 Noise**

Sound is most commonly measured in decibels (dB) on the A-weighted scale, which is the scale most similar to the range of sounds that the human ear can hear. The Day-Night Average Sound Level (DNL) is an average measure of sound. The DNL descriptor is accepted by federal

## **SECTION THREE**      **Affected Environment and Environmental Consequences**

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agencies as a standard for estimating sound impacts and establishing guidelines for compatible land uses.

Noise, defined herein as unwanted or unwelcome sound, is federally regulated by the Noise Control Act of 1972 (NCA). Although the NCA gives the EPA authority to prepare guidelines for acceptable ambient noise levels, it only charges those federal agencies that operate noise-producing facilities or equipment to implement noise standards. The EPA's guidelines, and those of many federal agencies, state that outdoor sound levels in excess of 55 dB DNL are "normally unacceptable" for noise-sensitive land uses such as residences, schools, and hospitals.

Noise associated with the proposed project would be emitted from mechanical equipment used in the demolition, construction, replacement, and repair of the drainageways. Texarkana regulates noise under section 16-91 of its City ordinance.

### **Alternative 1 – No Action Alternative**

Under Alternative 1, no construction would occur. Therefore, there would be no effect on ambient noise levels in the project area.

### **Alternative 2 – 100-Year Storm Design (Proposed Action)**

Under the Proposed Action, noise levels would be consistent with common construction practices. Construction would take place during normal business hours (8:00 am to 5:00 pm), when occasional loud noises are more tolerable, and noise impacts would be temporary for the duration of construction. There would be no long-term noise impacts associated with this alternative.

### **3.4.4 Public Services and Utilities**

Public services provided by the City of Texarkana include emergency, fire, rescue, and police operations, educational and medical services, recreational activities, and public utilities (water and sewer). Electricity in the area is provided by the Southwestern Electric Power Company. Texarkana Water Utilities is wholly owned by the City and provides water supply, treatment, and distribution, and wastewater collection and treatment. The Prince and Jackson Street project would intersect water and sewer mains.

### **Alternative 1 – No Action Alternative**

Under Alternative 1, no construction would occur. As a result, no immediate impact to public services and utilities would occur. Several residential streets are likely to experience flooding during significant storms, and emergency vehicles may not be able to access local homes in that event. In addition, the utility pipelines that cross Hays Creek could rupture during heavy flooding. This would leave some residents without water and sewer services.

### **Alternative 2 – 100-Year Storm Design (Proposed Action)**

Construction within the project areas would involve coordination with the City of Texarkana utility departments to ensure that impacts to those utilities that cross or parallel the channel are

## **SECTION THREE**      **Affected Environment and Environmental Consequences**

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minimized during construction. Proper planning would minimize interruption of utilities services. The Proposed Action would reduce the frequency and amount of post-flood repair to these utilities. Emergency vehicles would have improved access to homes during and after storms. The use of heavy machinery and activities associated with this alternative have the potential to adversely impact infrastructure and services in this area. During the heavy machinery deployment stage, school buses, police and fire vehicles, and ambulances could experience delays. These impacts would be temporary.

At Prince and Jackson Streets, water and sewer pipelines would be relocated to a depth of 36 inches below the channel bottom, therefore coordination with utility companies and the Texarkana Department of Public Works would be necessary for this project. There may be a short-term interruption to users during the utility relocation.

### **3.4.5 Traffic and Circulation**

Several agencies are responsible for the development, construction, and maintenance of roads in the project area. These include the U.S. Department of Transportation Federal Highway Administration (FHWA) for roads on the National Highway System and other roads, the Arkansas Highway and Transportation Department (AHTD) for state roads and funding for local projects, Miller County, and the Streets/Parks Division within the Public Works Department of the City of Texarkana. The local agencies are responsible for the design, construction, and maintenance of county and local public roads. Public transportation for the area is provided by the Texarkana Urban Transit District (TUTD).

The project areas are located within residential areas. The project sites would be accessed via secondary residential streets.

### **Alternative 1 – No Action Alternative**

Under Alternative 1, construction would not occur. There would be no immediate adverse effects to transportation or traffic patterns because no change would take place. However, the clean-up and repair efforts necessary after floodwaters subside would increase the number of vehicles in the area after a flood. Many roads would continue to be impassable during floods.

### **Alternative 2 – 100-Year Storm Design (Proposed Action)**

**Wood Street.** This portion of the Proposed Action may require asphalt replacement on Wood Street and/or parking replacement and possible utility relocations. The Proposed Action may necessitate the temporary re-routing of traffic on Wood Street and Broad Street during the site preparation and construction phases of the project.

Construction material delivered to the project site and cut material hauled from the site would travel on small streets through a residential area. Specific hauling routes would be determined by the Public Works Department of the City of Texarkana. Construction/hauling would be limited to daylight hours. These improvements would reduce required post-flood maintenance and repair of area infrastructure.

**Olive Branch.** Under the Proposed Action, the existing culverts would be removed and replaced by a larger box culvert designed to accommodate the 100-year flood. Additionally,

## **SECTION THREE**      **Affected Environment and Environmental Consequences**

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approximately 1,600 linear feet of drainage channel would be widened and its slopes shaped to the north and south of East 24<sup>th</sup> Street. This action would necessitate the re-routing of traffic along East 24<sup>th</sup> Street during the site preparation and construction phases of the project. An existing TUTD bus route (Route 1) designed to use East 24<sup>th</sup> Street would be temporarily rerouted.

Construction material delivered to the project area would travel on East 24<sup>th</sup> Street through a residential area. Specific hauling routes would be determined by the Public Works Department of the City of Texarkana. Construction/hauling would be limited to daylight hours. The improvement would reduce required post-flood maintenance and repair of area infrastructure.

**Jackson and Prince Streets.** Under the Proposed Action, the existing culverts would be augmented by a new box culvert, with the resulting series of culverts designed to pass the 100-year flood. This action would necessitate the re-routing of traffic on Prince Street and Jackson Street during the site preparation and construction phases of the project. There is no existing TUTD bus route using either Prince or Jackson Street.

Construction material delivered to the project site would travel on Prince Street and Jackson Street through a residential area. Specific hauling routes would be determined by the Public Works Department of the City of Texarkana. Construction/hauling would be limited to daylight hours. The improvement would reduce required post-flood maintenance and repair of area infrastructure.

Under the Proposed Action, the appropriate signage and barriers would be in place prior to construction activities to alert pedestrians and motorists of the activity, and to alert motorists of any temporary traffic patterns, detours, or delays. After construction is complete, local traffic patterns would return to normal.

### **3.4.6 Environmental Justice (Executive Order 12898)**

EO 12898 requires federal agencies to make achieving environmental justice part of their mission. Agencies are required to identify and correct programs, policies, and activities that have disproportionately high and adverse human health or environmental effects on minority and low-income populations. EO 12898 also tasks federal agencies with ensuring that public notifications regarding environmental issues are concise, understandable, and readily accessible.

Socioeconomic and demographic data were studied to determine if a disproportionate number (greater than 50 percent) of minority or low-income persons have the potential to be adversely affected by the proposed project. In compliance with FEMA's policy implementing EO 12898, Environmental Justice, the socioeconomic conditions and potential effects related to the No Action and Proposed Action have been reviewed.

According to the 2000 U.S. Census, Texarkana has a population of 26,448 people. Texarkana is represented by 65.9 percent white, 31.0 percent African American, 0.5 percent Native American, 0.5 percent Asian, 1.8 percent Hispanic, and 0.6 percent other race (U.S. Census Bureau, 2000). In comparison, Miller County has a population of 40,443 and is represented by 74 percent white, 22.9 percent African American, 0.63 percent Native American, 0.37 percent Asian, 1.6 percent Hispanic, and 1.99 percent other race. The state of Arkansas has a population of 2,673,400 and is represented by 80 percent white, 15.7 percent African American, 0.7 percent Native American, 0.8 percent Asian, 1.8 percent Hispanic, 0.1 percent native Hawaiian, and 1.5 percent other race.

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Texarkana's poverty level was 21.7 percent of the population in 2000. The median household income was \$31,343 (U.S. Census Bureau, 2000). For comparison, Miller County has a median income of \$30,951 per year, with 15 percent of the entire population below the poverty threshold. The State of Arkansas has a median income of \$21,147 per year, with 19 percent of the entire population below the poverty threshold. A low-income population is defined as one with a median income for a family of four equal to or below the national poverty level of \$17,500.

### **Alternative 1 – No Action Alternative**

Under Alternative 1, no construction would occur. Therefore, there would be no disproportionately high or adverse effects on minority or low-income populations. All citizens in the flood-prone areas would be subject to potential damages from future flooding events, since the existing drainage structures would continue to function inadequately.

### **Alternative 2 – 100-Year Storm Design (Proposed Action)**

The Proposed Action would not have disproportionately high or adverse effects on minority or low-income populations. This alternative would mitigate flood problems for all citizens in the flood-prone areas.

### **3.4.7 Safety and Security**

Safety and security issues that have been considered in this EA include the health and safety of the area residents and the public at-large, and protection of personnel involved in activities related to the implementation of the proposed construction of the drainage improvements. EO 13045, Protection of Children from Environmental Health Risks and Safety Risks, requires federal agencies to identify and assess environmental health and safety risks that may disproportionately affect children. EO 13045 is triggered, making it necessary to provide all appropriate safety measures during the construction activities because of likely presence of children in the area.

### **Alternative 1 – No Action Alternative**

Under Alternative 1, no construction would occur. Therefore, there would be no adverse effects to citizens within the project areas. However, the high risk of flooding and flood-related damages would remain. Because Alternative 1 does not involve the employment of personnel to perform drainage improvement activities, there would be no potential risks to the personal safety of those who would otherwise be performing the drainage improvement activities.

Alternative 1 would not adversely affect the child population in the project area; therefore, EO 13045 is not applicable.

### **Alternative 2 – 100-Year Storm Design (Proposed Action)**

Under the Proposed Action, construction activities could present safety risks to those performing the activities. To minimize risks to safety and human health, all drainage improvement activities would be performed using qualified personnel trained in the proper use of the appropriate

## **SECTION THREE**      **Affected Environment and Environmental Consequences**

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equipment including all appropriate safety precautions. Additionally, all activities would be conducted in a safe manner by trained personnel, in accordance with the standards specified in Occupational Safety and Health Administration (OSHA) regulations.

Due to the proximity of residences, it is possible that construction activities and equipment could pose a risk to young children living in the area; however, they are unlikely to disproportionately affect children. To mitigate for any potential safety risks, temporary fencing would be employed around the project site and equipment would be properly stored to prevent unauthorized access and discourage tampering. Once construction is completed and the projects are implemented there would be no change to safety risks from pre-construction conditions.

### **3.5 CULTURAL RESOURCES**

In addition to review under NEPA, consideration of impacts to cultural resources is mandated under Section 106 of the National Historic Preservation Act (NHPA), as amended, and implemented by 36 CFR Part 800. Requirements include identification of significant historic properties that may be impacted by the Proposed Action. Historic properties are defined as archaeological sites, standing structures, or other historic resources listed in or eligible for listing in the National Register of Historic Places (NRHP) (36 CFR 60.4). As defined in 36 CFR Part 800.16(d), the Area of Potential Effect (APE) “is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist.”

In addition to identifying historic properties that may exist in the project APE, the federal agency must also determine in consultation with the appropriate State Historic Preservation Officer (SHPO) what effect, if any, the action will have on historic properties. Moreover, if the project will have an adverse effect on these properties, the federal agency must consult with the SHPO on ways to avoid, minimize, or mitigate the adverse effect.

In four letters dated July 22, 1999, the Arkansas SHPO stated that no historic properties or archeological resources are known to exist within the APE for the three projects (Wood Street, Olive Branch, and Jackson and Prince Streets) currently proposed for funding under the HMGP (Appendix A). Therefore, none of the project alternatives would have an adverse effect on any known historic properties or archeological resources.

Should any historic or archaeological materials of potential significance be discovered during project construction or staging of equipment, all activities on the site would be halted immediately and the Applicant would consult with FEMA, the Arkansas Department of Emergency Management, and the SHPO.



The CEQ regulations, which implement the NEPA of 1969 (42 U.S.C. 4321 et seq.), require assessment of cumulative impacts in the decision-making process for federal projects.

Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

According to Mr. Carl Conley of the Texarkana, Arkansas Planning Department (Conley, pers. comm.), there are no current, ongoing drainage projects being implemented within the City. Mr. Conley stated in correspondence on January 7, 2003, that the city has several projects being proposed within the next few months, but it is not certain if these projects will be constructed.

It is not anticipated that the Proposed Action would cumulatively affect the human environment. Drainage improvements at Wood Street; widening of the existing channels at Olive Branch and Jackson and Prince Streets; and installation of larger culverts at Wood Street, Olive Branch, and Jackson and Prince Streets, would reduce erosion and water velocities in the channels. As with any large flood, there would be a large amount of sediment in the surface water from local runoff, and this sedimentation would be present regardless of the Proposed Action. Smaller storms would yield the same results but for a more localized area.

FEMA is the lead federal agency for conducting the NEPA compliance process for the Drainage Improvements on Wood Street, Olive Branch, and at Jackson and Prince Streets in the City of Texarkana, Arkansas. The lead agency's goal is to expedite the preparation and review of NEPA documents to be responsive to the needs of the community and the Applicant, while meeting the intent of NEPA and complying with all NEPA provisions including NHPA, EO 11988, and EO 11990.

A Draft Environmental Assessment of the Drainage Improvements on Wood Street, Olive Branch, and Jackson and Prince Streets in the City of Texarkana, Arkansas was made available for public review in the Texarkana Public Library from July 11 to August 9, 2004. A Public Notice advertising the availability of the Draft EA was placed in the Texarkana Gazette on July 11, 2004. No comments were received.

The following mitigation measures would be required for the implementation of the Proposed Action, the improvement of drainage structures.

1. If project activities include the stockpiling of soil or fill on-site, the Applicant would cover these soils to help prevent fugitive dust and increased soil erosion into stormwater pathways.
2. The Applicant would employ soil erosion mitigation measures including the use of temporary installation silt fences and/or hay bales, and the staging of construction equipment in existing developed areas, such as paved parking lots, to reduce runoff and soil erosion from the project area.
3. Following construction activities, exposed, compacted soils would be aerated and revegetated with native grasses as appropriate to prevent future soil erosion.
4. The Applicant would obtain a stormwater permit from ADEQ.
5. The Applicant would coordinate with the local floodplain administrator for possible local permits or approvals prior to construction.
6. To reduce temporary impacts to air quality, the Applicant would be required to water down construction areas when necessary.
7. To reduce emissions of criteria pollutants, fuel-burning equipment running times would be kept to a minimum and engines would be properly maintained.
8. Trees would be fenced around the dripline to minimize encroachment by project personnel and equipment.
9. The applicant would comply with the USACE Nationwide Permit General Conditions and Regional Conditions for the Olive Branch project.
10. Any hazardous materials discovered, generated, or used during implementation of the proposed project would be disposed of and handled by the Applicant in accordance with applicable local, state, and federal regulations.
11. Construction would take place during normal business hours. Construction/hauling would be limited to daylight hours.
12. The Applicant would coordinate with utility companies and the Texarkana Department of Public Works.
13. Appropriate signage and barriers would be in place prior to construction activities to alert pedestrians and motorists of the activity, and to alert motorists of any new traffic patterns, detours, or delays.
14. To minimize risks to safety and human health, all drainage improvement activities would be performed using qualified personnel trained in the proper use of the appropriate equipment including all appropriate safety precautions. Additionally, all activities would be conducted in a safe manner by trained personnel, in accordance with the standards specified in OSHA regulations.
15. To mitigate for any potential safety risks, temporary fencing would be employed around the project site and equipment would be properly stored to prevent unauthorized access and discourage tampering.

16. Should any historic or archaeological materials of potential significance be discovered during project construction or staging of equipment, all activities on the site would be halted immediately and the Applicant would consult with FEMA, the Arkansas Department of Emergency Management, and the SHPO.

*References:*

- City of Texarkana Homepage. 2000. Climate Page.  
[http://www.texarkana.org/body\\_climate.html](http://www.texarkana.org/body_climate.html) Visited June 29, 2001.
- City of Texarkana. 2000a. Application for Hazard Mitigation Grant – Wood Street.
- City of Texarkana. 2000b. Application for Hazard Mitigation Grant – Olive Branch.
- City of Texarkana. 2000c. Application for Hazard Mitigation Grant – Jackson and Prince Street.
- Federal Emergency Management Agency. 2001. Revised Flood Insurance Rate Map. City of Texarkana. Community Panel Numbers 0501370066 C and 0501370059 C.
- Little, Jr., Elbert L. and Lomeo, Angelo. 1980. National Audubon Society Field Guide to North American Trees, Eastern Region. Chanticleer Press, Inc.
- National Park Service. 2003. Wild and Scenic Rivers Act.  
<http://www.nps.gov/rivers/wildriverslist.html> Visited January 6, 2003.
- Niering, William A., Thieret, John W., Olmstead, Nancy C. 1980. National Audubon Society Field Guide to North American Wildflowers, Eastern Region, Niering, Chanticleer Press, Inc., 1980.
- NRS Consulting Engineers. 1999. City of Texarkana, Arkansas, Drainage Plan: Nix Creek and Nix Creek Tributaries.
- Red River Authority of Texas. Hydrologic Unit Area 11140302 – Lower Sulphur. 1999-2000. <http://www.rra.dst.tx.us/hua/11140302/11140302.CFM>. Visited January 15, 2003.
- Tiner, Ralph. 1993. Field Guide to Coastal Wetland Plants of the Southeastern United States. The University of Massachusetts Press.
- U.S. Census Bureau. 2000. American FactFinder, Texarkana Population, Income and Poverty Survey, 2000 Census. <http://factfinder.census.gov> Visited July 5, 2001.
- U.S. Department of Agriculture, Soil Conservation Service (USDA/SCS). 1981. Soil Survey of Miller County, Arkansas.
- U.S. Environmental Protection Agency. 1998. Surf Your Watershed. Lower Sulphur Watershed Profile. [http://cfpub.epa.gov/surf/huc.cfm?huc\\_code=11140302](http://cfpub.epa.gov/surf/huc.cfm?huc_code=11140302). Visited January 15, 2003.
- U.S. Environmental Protection Agency. 2003. Criteria Pollutant Area Summary Report. <http://www.epa.gov/oar/oaqps/greenbk/anc12.html>. Visited April 30, 2003.
- U.S. Fish and Wildlife Service. 2002. Division of Migratory Bird Management. <http://migratorybirds.fws.gov>. Visited June 14, 2002.

### *Personal Communications:*

Conley, Carl. 2003. Texarkana Planning Department. Telephone Conversation with Heather Green, URS Corporation, January 7.

Conley, Carl. 2001. Texarkana Planning Department. Telephone Conversation with Patricia Greenburg, URS Corporation, July 30.

Franks, Anthony. 2001. NRS Consulting Engineers. Telephone Conversation with Ryan Thompson, URS Corporation, July 11.

Irvin, Jeff. 2002. URS Group, Inc. Electronic Mail to Ryan Thompson, URS Corporation, December 2.

**URS Group Inc.**

Ryan Thompson, Environmental Planner, Task Order Coordinator

Jeff Irvin, Senior Water Resource Engineer, Preparer

Justin Roper, Biologist, Preparer

Heather Green, Biologist/Environmental Analyst, Preparer

Amy Siegel, Technical Editor, Document Quality Control

Angela Chaisson, NEPA Group Leader, Independent Technical Reviewer, Quality Assurance Coordinator

Terri West, PG, Independent Technical Reviewer

Erica Zamensky, Technical Editor

Stephen Carruth, FEMA National Environmental Coordinator

**Appendix A**  
**Agency Correspondence**



**The following agencies were consulted during preparation of this EA:**

U.S. Department of Agriculture  
Natural Resources Conservation Service  
Room 3416, Federal Building  
700 West Capitol Avenue  
Little Rock, Arkansas 72201-3225

NRS Consulting Engineers  
4415 Jefferson Avenue  
Texarkana, Arkansas 71854

City of Texarkana  
East 3<sup>rd</sup> and Walnut Streets 71854  
P.O. Box 2711  
Texarkana, Arkansas 75504

Arkansas Department of Environmental  
Quality  
8001 National Drive  
Little Rock, Arkansas 72209

Arkansas Soil and Water Conservation  
Commission  
101 East Capital, Suite 350  
Little Rock, Arkansas 72201

Department of the Army  
Vicksburg District, Corps of Engineers  
4155 Clay Street  
Vicksburg, Mississippi 39183-3435

U.S. Fish and Wildlife Service  
Arkansas Ecological Services Field Office  
1500 Museum Road, Suite 105  
Conway, Arkansas 72032

Arkansas Natural Heritage Commission  
1500 Tower Building  
323 Center Street  
Little Rock, Arkansas 72201

Arkansas Historic Preservation Program  
State Historic Preservation Officer  
1500 Tower Building  
323 Center Street  
Little Rock, Arkansas 72201

To obtain copies of agency correspondence, contact:

Ryan Thompson  
URS Group, Inc  
200 Orchard Ridge Dr, Suite 101  
Gaithersburg, MD 20878  
Tel: 301-258-9780

**Appendix B**  
**EO 11988 and EO 11990**  
**Eight-Step Planning Process**

## EO 11988 and EO 11990 Eight-Step Planning Process

### Executive Order 11988 Floodplain Management Executive Order 11990 Wetland Protection Eight-Step Planning Process Summary

#### Drainage Improvements on Wood Street, Olive Branch, and Jackson and Prince Streets

<p><b>Step 1:</b> Determine whether the Proposed Action is located in a wetland and/or the 100-year floodplain, or whether it has the potential to affect or be affected by a floodplain or wetland.</p>	<p><b>Project Analysis:</b> According to the FHBM for the City of Texarkana, the Olive Branch project area is within the regulated floodplain. Wood Street and Jackson and Prince Streets are not within the current 100-year floodplain. The Proposed Action would not have a negative effect on the 100-year floodplain. There will be minor impacts to nonjurisdictional wetland resources due to the Proposed Action.</p>
<p><b>Step 2:</b> Notify public at earliest possible time of the intent to carry out an action in a floodplain or wetland, and involve the affected and interested public in the decision-making</p>	<p><b>Project Analysis:</b> A public notice will be posted in the community's newspaper indicating that actions would potentially occur in the 100-year floodplain and/or wetlands. The City would be required to notify the public again prior to construction.</p>
<p><b>Step 3:</b> Identify and evaluate practicable alternatives to locating the Proposed Action in a floodplain or wetland.</p>	<p><b>Project Analysis:</b> The following alternatives were evaluated:</p> <p><u>Alternative 1: No Action.</u></p> <p><u>Alternative 2: Proposed Action. 100-year Storm Design.</u></p> <p><u>Wood Street.</u> This part of the proposed project would improve stormwater flows along a portion of Wood Street and Broad Street southward toward the railroad tracks. The improvements would consist of installing larger subsurface RCP, storm drains, and channel excavations, thus providing more capacity during storm events.</p> <p><u>Olive Branch.</u> This improvement would reduce floodwater depths in the Woodland Road and East 24<sup>th</sup> Street area. Improvements would include a double 7-foot by 3-foot reinforced box culvert, spanning approximately 100 linear feet, and approximately 1,600 linear feet of slope shaping and channel-widening to the north and south of East 24<sup>th</sup> Street.</p>

## EO 11988 and EO 11990 Eight-Step Planning Process

	<p><u>Jackson and Prince Streets.</u> This improvement would included the installation of double 6-foot by 4-foot concrete box culverts at Jackson Street and Prince Street, and 20 tons of asphaltic concrete to replace the road surface. These culverts are on Hays Creek and would reduce the floodwater depths in that area. Both culverts would be approximately 60 linear feet. Channel excavation, widening, and slope shaping will also be performed from Division Street to east of Prince Street for approximately 1,300 linear feet. This part of the project would be designed to accommodate the 100-year storm event.</p>
<p><b>Step 4:</b> Identify the full range of potential direct or indirect impacts associated with the occupancy or modification of floodplains and wetlands and the potential direct and indirect support of floodplain and wetland development that could result from the Proposed Action.</p>	<p><b>Project Analysis:</b></p> <p>The <u>No Action Alternative</u> would not affect the 100-year floodplain. No drainage improvements would be undertaken; therefore, there would no direct or indirect impacts to jurisdictional waters in the project area or the floodplain.</p> <p><u>Alternative 2, the Proposed Action,</u> is likely to result in minor and temporary impacts associated with the occupancy or modification of the floodplain. Removal of vegetation is not expected to affect the floodplain. In accordance with CFR 44 Sec. 9.5, debris removed as part of the improvement project would not be disposed of within a floodplain. Based on letters from the USACE Vicksburg District, dated January 22, 2001 and March 13, 2003 the Wood Street, and Jackson and Prince Streets portions of the project are exempt from Section 404 of the Clean Water Act, therefore, a Department of the Army permit would not be required. However, the Olive Branch portion of the project will be authorized by Nationwide Permit No. 3, provided the activity complies with nationwide Permit Conditions and Regional Conditions. Mitigation measures described in Section 3.1.1 Geology, Seismicity and Soils, would minimize the potential adverse indirect impacts. The improvement will reduce erosion and water velocities in the channels. Overall, an estimated 31 homes and 3 businesses would no longer be prone to frequent flooding as a result of the implementation of the Proposed Action.</p>

EO 11988 and EO 11990 Eight-Step Planning Process

<p><b>Step 5:</b> Minimize the potential adverse impacts to work within floodplains and wetlands to be identified under Step 4, restore and preserve the natural and beneficial values served by wetlands.</p>	<p><b>Project Analysis:</b> The following mitigation measures would minimize potential adverse impacts within the floodplain. The City would cover stockpiled soils to help prevent fugitive dust and soil erosion. The City would use temporary erosion and sediment controls, including the temporary installation of silt fences and/or hay bales, hydro-seeding, and the staging of construction equipment in existing developed or previously disturbed areas such as paved parking lots. Bare soils would be aerated and re-vegetated with native grasses after construction to prevent future soil erosion.</p>
<p><b>Step 6:</b> Re-evaluate the Proposed Action to determine: 1) if it is still practicable in light of its exposure to flood hazards; 2) the extent to which it will aggravate the hazards to others; and 3) its potential to disrupt floodplain and wetland values.</p>	<p><b>Project Analysis:</b> The Proposed Action remains practicable based on the flood prevention objective.</p>
<p><b>Step 7:</b> If the agency decides to take an action in a floodplain or wetland, prepare and provide the public with a finding and explanation of any final decision that the floodplain or wetland is the only practicable alternative. The explanation should include any relevant factors considered in the decision-making process.</p>	<p><b>Project Analysis:</b> A public notice will be made based on the decision to proceed with the Proposed Action. At a minimum, this notice shall state a reason for locating the Proposed Action in the floodplain, a description of all significant facts considered in making determination, a list of the alternatives considered, a statement indicating whether the action conforms to state and local floodplain protection standards, and a statement indicating how the action affects the wetlands and how mitigation is achieved.</p>
<p><b>Step 8:</b> Review the implementation and post-implementation phases of the Proposed Action to ensure that the requirements of the EOs are fully implemented. Oversight responsibility shall be integrated into existing processes.</p>	<p><b>Project Analysis:</b> This step is integrated into the NEPA process and FEMA project management and oversight functions.</p>

**Appendix C**  
**Public Notice**

**PUBLIC NOTICE**

**Environmental Assessment for Construction of the Drainage Improvements on Wood Street, Olive Branch, and at Jackson and Prince Streets, in the City of Texarkana, Miller County, Arkansas. FEMA-1266-AR.**

Interested persons are hereby notified that the Federal Emergency Management Agency (FEMA) is proposing to assist in the funding of the drainage improvements on Wood Street, Olive Branch, and at Jackson and Prince Streets in the City of Texarkana in Miller County, Arkansas. In accordance with the National Environmental Policy Act of 1969, the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500-1508), the National Historic Preservation Act, and the implementing regulations of FEMA (44 CFR Part 9 and 10), an Environmental Assessment (EA) is being prepared to assess the potential impacts of the Proposed Action on the built and natural environments. This public notice also serves as notice for Executive Order (EO) 11988, Floodplain Management and, EO 11990 Protection of Wetlands.

The EA evaluates alternatives that provide for compliance with applicable environmental laws. The alternatives to be evaluated include (1) No Action and (2) 100-Year Storm Design (Proposed Action).

The Draft EA is available for review between July 11, 2004 and August 9, 2004, at the Texarkana Public Library, 600 West 3<sup>rd</sup> Street, Texarkana, Texas 75501 between the hours of 8:00 AM and 5:00 PM. The EA is also available for review online at the FEMA website: <http://www.fema.gov/ehp/docs.shtm>.

Written comments regarding this action should be directed no later than 5:00 p.m. August 9, 2004, to Ryan Thompson, URS Group, Inc., 200 Orchard Ridge Drive, Suite 101, Gaithersburg, MD 20878. Telephone (301) 670-3387.

**Federal Emergency Management Agency**  
**PUBLIC NOTICE**

**Notice of Availability of the Final Environmental Assessment (EA) and**  
**Finding of No Significant Impact (FONSI)**

**Drainage Improvements on Wood Street, Olive Branch, and Jackson and Prince Streets City of**  
**Texarkana, Arkansas**

Interested persons are hereby notified that the Federal Emergency Management Agency (FEMA) is proposing to assist in the funding of a drainage improvements project for the City of Texarkana, Arkansas. In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500-1508), National Historic Preservation Act (NHPA), Executive Order 11988, Executive Order 11990, and the implementing regulations of FEMA (44 CFR Part 9 and 10), an Environmental Assessment (EA) was prepared to assess the potential impacts of the Proposed Action on the human and natural environment. The EA was released for public comment on July 11, 2004. No public comments were received during the 30-day comment period; therefore, the EA has been finalized and a Finding of No Significant Impact (FONSI) has been made. This also provides public notice for potential work within the regulated floodplain, in accordance with Executive Order 11988 and 44 CFR Part 9.12.

The reasons for the decision not to prepare an Environmental Impact Statement (EIS) are as follows:

1. No significant adverse environmental impacts have been identified to existing land use, water resources (surface water, groundwater, waters of the United States, wetlands, and floodplains), air quality, noise, biological resources (vegetation, fish and wildlife, state and Federally listed threatened or endangered species and critical habitats), safety, hazardous materials and waste, cultural resources, or result in disproportionately high or adverse effects on minority or low-income populations, and
2. The project is necessary to meet the needs of the citizens in the City of Texarkana.

No further environmental review of this project is proposed to be conducted prior to the release of FEMA funds.

Copies of the final EA and FONSI can be obtained by contacting:

Andy Franks, P.E.  
NRS Consulting Engineers  
4415 Jefferson Ave.  
Texarkana, Arkansas 71854

The final EA and FONSI are also available on the FEMA website: <http://www.fema.gov/ehp/docs.shtm>. Copies will be available for viewing at the Texarkana Public Library, 600 West 3<sup>rd</sup> Street, Texarkana, Texas 75501.



**Appendix D**  
**Public Comments**

No comments were received.